APPENDIX B

BORING, CPT, AND WELL INSTALLATION LOGS

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Project SAIA | Logged By E. Gilleva | **Boring No.** SAIA-SB1

Project Number 07163.0004 | Date Drilled 4/5/13 | Sheet 1 Of 1

Location Seam Masters | Total Depth 35' | Boring Location Sketch

Surface Elevation n/a | Boring Diameter 2" | N

Drillers Gregg Drilling

Method direct push

Depth (Feet)	Sample Interval	Blow Counts	PID (ppm) B-zone/stem/sample	Water Level	Well Construction	Lithology / USCS	DESCRIPTION
0.5							Poorly graded sand; loose; light brown & olive gray; dry; 95% fine sand; 5% fines.
2							No change.
5							Poorly graded sand; loose; brown & greenish gray; dry; mostly fine sand; trace fines.
15							Poorly graded sand; loose; yellowish brown & olive gray; damp; 90% fine sand; 10% fines.
25							Silty sand; med. stiff; light brown; damp; 50% fine sand; 50% fines. low plasticity.
35							Poorly graded sand; loose; olive gray & light gray; dry; 95% med to fine sand; 15% fines.

Casing Diameter _____ Casing Length _____ From _____ To _____

Screen Size _____ Screen Length _____ From _____ To _____

Sand Type _____ From _____ To _____

Bentonite Type _____ From _____ To _____

Cement/Grout _____ From _____ To _____

Surface Completion _____

ITS Innovative Technical Solutions, Inc.

Project SAIA | Logged By E. Gillera | **Boring No.** SAIA-SB03

Project Number 07163.0064 | Date Drilled 4/1/13 | Sheet 1 Of 1

Location Seam Masters | Total Depth 35'

Surface Elevation n/a | Boring Diameter 2"

Drillers Gregg Drilling

Method direct push

Boring Location Sketch

Depth (Feet)	Sample Interval	Blow Counts	PID (ppm) B-zone/stem/sample	Water Level	Well Construction	Lithology / USCS	DESCRIPTION
0.5							Poorly graded sand; loose; olive gray & dark gray; dry; mostly fine sands; trace fines.
2							No change.
5							Silty sand; med. stiff; olive gray; dry; 60 % fine sand; 40 % fines; low plasticity.
15							Silty sand; med. stiff; olive gray & dark gray; damp; 50 % fine sand; 50 % fines; low plasticity
25							No change.
35							Poorly graded sand; loose; light gray & olive gray; dry; 90 % fine sand; 10 % fines.

Casing Diameter _____ Casing Length _____ From _____ To _____

Screen Size _____ Screen Length _____ From _____ To _____

Sand Type _____ From _____ To _____

Bentonite Type _____ From _____ To _____

Cement/Grout _____ From _____ To _____

Surface Completion _____

ITSI Innovative Technical Solutions, Inc.

Project SAIA | Logged By E. Gilkey | **Boring No.** SAIA-SB4

Project Number 07163.0064 | Date Drilled 4/1/13 | Sheet 1 Of 1

Location Sam Masters | Total Depth 35'

Surface Elevation n/a | Boring Diameter 2"

Drillers Gregg Drilling

Method direct push

Boring Location Sketch

Depth (Feet)	Sample Interval	Blow Counts	PID (ppm) B-zone/stem/sample	Water Level	Well Construction	Lithology / USCS	DESCRIPTION
0.5							Poorly graded sand; loose; olive gray; dry; mostly fine sand; trace fines.
2							No change.
5							Poorly graded sand; loose; olive gray; dry 70% med to fine sand; 30% fines.
15							Silty sand; med. stiff; brown & dark gray; damp; mostly fine sand; 25% fines; med. plasticity.
25							Silty sand; soft; olive gray & dark gray; damp; 40% ~~first~~ fine sand; 40% fines; low plasticity.
35							No change.

Casing Diameter _____ Casing Length _____ From _____ To _____

Screen Size _____ Screen Length _____ From _____ To _____

Sand Type _____ From _____ To _____

Bentonite Type _____ From _____ To _____

Cement/Grout _____ From _____ To _____

Surface Completion _____

ITSI **Innovative Technical Solutions, Inc.**

Project SAIA | Logged By E. Gillera | **Boring No.** SAIA-SB6

Project Number 07163.0004 | Date Drilled 4/3/13 | Sheet 1 Of 1

Location Steam Masters | Total Depth 35'

Surface Elevation n/a | Boring Diameter 2"

Drillers Gregg Drilling

Method direct push

Boring Location Sketch

Depth (Feet)	Sample Interval	Blow Counts	PID (ppm) B-zone/stem/sample	Water Level	Well Construction	Lithology / USCS	DESCRIPTION
0.5							Moderately graded sand; loose; ~~tan~~ light gray to dark gray; dry; mostly sand, med. to fine; trace fines.
2							No change.
5							Poorly graded sand; loose; olive gray; dry; 75 % fine sand; 25 % fines.
15							silty sand; med. stiff; light gray; damp; 60 % fine sand; 40 % fines; med. plasticity.
25							Silty sand; med stiff; light gray to dark gray; moist; 70% fine sand; 30 % fines; med. plasticity.
35							Poorly graded sand; loose; olive gray & light gray; damp; 65 % fine sand.

Casing Diameter _____ Casing Length _____ From _____ To _____

Screen Size _____ Screen Length _____ From _____ To _____

Sand Type _____ From _____ To _____

Bentonite Type _____ From _____ To _____

Cement/Grout _____ From _____ To _____

Surface Completion _____

ITSI Innovative Technical Solutions, Inc.

Project SAIA | Logged By E. Gillera | **Boring No.** SAIA-SB8

Project Number 07163.0004 | Date Drilled 4/3/13 | Sheet 1 Of 1

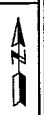
Location Seam Masters | Total Depth 35'

Surface Elevation w/a | Boring Diameter 2"

Drillers Gregg Drilling

Method direct push

Boring Location Sketch



Depth (Feet)	Sample Interval	Blow Counts	PID (ppm) B-zone/stem/sample	Water Level	Well Construction	Lithology / USCS	DESCRIPTION
0.5							Poorly ~~sorted sand~~ graded sand: loose; olive gray; dry; 95 % fine sand; 5 % fines
2							Moderately graded sand; loose; light gray & light brown; dry; mostly sand, med. to fine; trace fines.
5							Poorly graded sand; loose; light gray & olive gray; dry; 60 % fine sand; 40 % fines.
15							Silty sand; med. stiff; light gray; damp; 60 % fine sand; 40 % fines; med. plasticity.
25							No change.
35							Poorly graded sand; loose; greenish gray & light brown; dry; 90 % med to fine sand; 10 % fines.

Casing Diameter _____ Casing Length _____ From _____ To _____

Screen Size _____ Screen Length _____ From _____ To _____

Sand Type _____ From _____ To _____

Bentonite Type _____ From _____ To _____

Cement/Grout _____ From _____ To _____

Surface Completion _____

ITSI Innovative Technical Solutions, Inc.

Project SAIA | Logged By E. Gillera | **Boring No.** SAIA-SB9

Project Number 07163.0064 | Date Drilled 4/5/13 | Sheet 1 Of 1

Location Seam Masters | Total Depth 35'

Surface Elevation w/a | Boring Diameter 2"

Drillers Gregg Drilling

Method direct push

Boring Location Sketch

Depth (Feet)	Sample Interval	Blow Counts	PID (ppm) B-zone/stem/sample	Water Level	Well Construction	Lithology / USCS	DESCRIPTION
0.5							Poorly graded sand; loose; dark gray; dry; Mostly sand, fine; trace fines.
2							No change
5							No change
15							Poorly graded sand; loose; olive gray; dry; 80% fine sand; 20% fines.
25							Poorly graded sand; loose; olive gray & greenish gray; damp; 70% fine sand; 30% fines.
35							Poorly graded sand; loose; olive gray; dry; 75% fine sand; 25% fines.

Casing Diameter _____ Casing Length _____ From _____ To _____

Screen Size _____ Screen Length _____ From _____ To _____

Sand Type _____ From _____ To _____

Bentonite Type _____ From _____ To _____

Cement/Grout _____ From _____ To _____

Surface Completion _____

ITSI Innovative Technical Solutions, Inc.

Project SAIA | Logged By E. Gillens | **Boring No.** SAIA-SB10

Project Number 07163.0064 | Date Drilled 4/5/13 | Sheet 1 Of 1

Location Seam Masters | Total Depth 35'

Surface Elevation w/g | Boring Diameter 2"

Drillers Gregg Drilling

Method direct push

Boring Location Sketch

Depth (Feet)	Sample Interval	Blow Counts	PID (ppm) B-zone/stem/sample	Water Level	Well Construction	Lithology / USCS	DESCRIPTION
0.5							Poorly graded sand; loose; olive gray & light gray; dry; mostly sand, fine; trace fines.
2							No change.
5							No change.
15							Silty sand; med. stiff; olive gray; damp; mostly fines; some fine sand; med. plasticity.
25							No change.
35							Poorly-sorted sand; loose; greenish gray; damp to moist; 90% fine sand; 10% fines.

Casing Diameter _____ Casing Length _____ From _____ To _____

Screen Size _____ Screen Length _____ From _____ To _____

Sand Type _____ From _____ To _____

Bentonite Type _____ From _____ To _____

Cement/Grout _____ From _____ To _____

Surface Completion _____

ITSI Innovative Technical Solutions, Inc.

Project SAIA | Logged By E. Cilleros | **Boring No.** SAIA-SB11

Project Number 07163.0004 | Date Drilled 4/3/13 | Sheet 1 Of 1

Location Seam Masters | Total Depth 35' | Boring Location Sketch

Surface Elevation n/a | Boring Diameter 2" | N

Drillers Gregg Drilling

Method direct push

Depth (Feet)	Sample Interval	Blow Counts	PID (ppm) B-zone/stem/sample	Water Level	Well Construction	Lithology / USCS	DESCRIPTION
0.5							Poorly graded sand; loose; yellowish brown & dark gray; dry; 95 %. med to fine sand; trace fines.
2							No change.
5							No change.
15							Poorly graded sand; loose; olive gray & dark brown; damp; 80 %. sand, fine; 20 %. fines.
25							Silty sand: med stiff; olive gray & light gray; moist; mostly fines; some fine sand; med. plasticity.
35							Poorly graded sand; loose; olive gray & light brown; damp; 90 %. fine sand; 10 %. fines.

Casing Diameter _____ Casing Length _____ From _____ To _____

Screen Size _____ Screen Length _____ From _____ To _____

Sand Type _____ From _____ To _____

Bentonite Type _____ From _____ To _____

Cement/Grout _____ From _____ To _____

Surface Completion _____

ITSI Innovative Technical Solutions, Inc.

Project SAIA | Logged By E. Gillera | **Boring No.** JW-SB1

Project Number 07163.0001 | Date Drilled 4/9/13 | Sheet 1 Of 1

Location United Motor Co. | Total Depth 35'

Surface Elevation n/a | Boring Diameter 2"

Drillers Gregg Drilling

Method direct push

Boring Location Sketch

Depth (Feet)	Sample Interval	Blow Counts	PID (ppm) B-zone/stem/sample	Water Level	Well Construction	Lithology / USCS	DESCRIPTION
5							moderately graded sand; loose; dark gray; dry; mostly sand, fine, rounded; trace fines
15							silty sand; med. stiff; dark gray; damp; mostly fines; some fine sand; med. plasticity.
25							moderately graded sand; loose; dark gray; moist; mostly sand, fine; 15 % fines.
35							well graded sand; loose; light brown & gray; dry; 90 % sand, med to fine; 10 % fines.

Casing Diameter _____ Casing Length _____ From _____ To _____

Screen Size _____ Screen Length _____ From _____ To _____

Sand Type _____ From _____ To _____

Bentonite Type _____ From _____ To _____

Cement/Grout _____ From _____ To _____

Surface Completion _____

ITSI Innovative Technical Solutions, Inc.

Project # 07163.0004 | Logged By E. Gilkes | **Boring No.** JW-SB2

Project ~~Number~~ SAIA | Date Drilled 4/9/13 | Sheet 1 Of 1

Location United Motor Co. | Total Depth 35'

Surface Elevation N/A | Boring Diameter 2"

Drillers Gregg Drilling

Method direct push

Boring Location Sketch

Depth (Feet)	Sample Interval	Blow Counts	PID (ppm) B-zone/stem/sample	Water Level	Well Construction	Lithology / USCS	DESCRIPTION
5'							Moderately graded sand; loose; olive gray to dark gray; dry; mostly sand, ~~rounded~~ fine, rounded; 20% fines.
15'							Silty sand; med. stiff; olive gray to dark gray; damp; ~~fine sand~~ 60% fine sand; 40% fines; med. plasticity.
25'							Moderately graded sand; loose; dark gray; damp; mostly sand, fine; 15% fines.
35'							Well graded sand; loose; light brown & gray; dry; 90% fine sand; rounded; 10% fines.

Casing Diameter _____ Casing Length _____ From _____ To _____

Screen Size _____ Screen Length _____ From _____ To _____

Sand Type _____ From _____ To _____

Bentonite Type _____ From _____ To _____

Cement/Grout _____ From _____ To _____

Surface Completion _____

ITSI Innovative Technical Solutions, Inc.

Project SAIA | Logged By E. Gillera | **Boring No.** VW-SB3

Project Number 07163.0004 | Date Drilled 4/4/13 | Sheet 1 Of 1

Location Reliable Steel | Total Depth 35'

Surface Elevation n/a | Boring Diameter 2"

Drillers Gregg Drilling

Method direct push

Boring Location Sketch

Depth (Feet)	Sample Interval	Blow Counts	PID (ppm) B-zone/stem/sample	Water Level	Well Construction	Lithology / USCS	DESCRIPTION
		5					Poorly graded sand; loose; dark brown & dark gray; dry; 80% fine sand; 20% fines
		15					Silty sand; med. stiff; olive gray & dark gray; damp; mostly fines; some fine sand; med. plasticity
		25					Poorly graded sand; loose; olive gray & light brown; moist; 85% fine sand; 15% fines.
		35					Poorly graded sand; loose; light gray to olive gray; dry; 80% fine sand; 20% fines.

Casing Diameter _____ Casing Length _____ From _____ To _____

Screen Size _____ Screen Length _____ From _____ To _____

Sand Type _____ From _____ To _____

Bentonite Type _____ From _____ To _____

Cement/Grout _____ From _____ To _____

Surface Completion _____

ITSI **Innovative Technical Solutions, Inc.**

Project #07163.0004 | Logged By E. Cillero | **Boring No.** JW-SB4

Project ~~Number~~ SAIA | Date Drilled 4/4/13 | Sheet 1 Of 1

Location Reliable Steel | Total Depth 35' | Boring Location Sketch

Surface Elevation n/a | Boring Diameter 2" | 

Drillers Gregg Drilling

Method direct push

Depth (Feet)	Sample Interval	Blow Counts	PID (ppm) B-zone/stem/sample	Water Level	Well Construction	Lithology / USCS	DESCRIPTION
5							Moderately graded sand; loose; dark brown & dark gray; dry; 75% fine sands; 25% fines.
15							Silty sand; med. stiff; olive gray; damp; mostly fines; some ~~fine~~ fine sand; med. plasticity.
25							Poorly graded sand; loose; light brown & light gray; damp; 80% fine sand; 20% fines.
35							Poorly graded sand; loose; light gray to olive gray; dry; 70% fine sand; 30% fines.

Casing Diameter _____ Casing Length _____ From _____ To _____

Screen Size _____ Screen Length _____ From _____ To _____

Sand Type _____ From _____ To _____

Bentonite Type _____ From _____ To _____

Cement/Grout _____ From _____ To _____

Surface Completion _____

ITSI **Innovative Technical Solutions, Inc.**

Project SAIA | Logged By E. Giltera | **Boring No.** JW-SB5

Project Number 07163.0044 | Date Drilled 4/4/13 | Sheet 1 Of 1

Location Reliable Steel | Total Depth 35'

Surface Elevation NA | Boring Diameter 2"

Drillers Gregg Drilling

Method direct push

Boring Location Sketch

Depth (Feet)	Sample Interval	Blow Counts	PID (ppm) B-zone/stem/sample	Water Level	Well Construction	Lithology / USCS	DESCRIPTION
5							Moderately graded sand; loose; dark gray; dry; mostly sand, fine; 20 % fines.
15							Silty sand; med. stiff; dark gray; damp; mostly fines, 15% fine sands; med. plasticity.
25							Poorly graded sand; loose; olive gray & light brown; moist; mostly sand, fine; 5 % fines.
35							Moderately graded sand; loose; light gray to olive gray; dry; mostly sand, fine; trace fines.

Casing Diameter _____ Casing Length _____ From _____ To _____

Screen Size _____ Screen Length _____ From _____ To _____

Sand Type _____ From _____ To _____

Bentonite Type _____ From _____ To _____

Cement/Grout _____ From _____ To _____

Surface Completion _____

ITSI **Innovative Technical Solutions, Inc.**

Project SAIA | Logged By E. Villera | **Boring No.** VW-SB6

Project Number 07163.0064 | Date Drilled 4/4/13 | Sheet 1 Of 1

Location Reliable Steel | Total Depth 35'

Surface Elevation n/a | Boring Diameter 2"

Drillers Gregg Drilling

Method direct push

Boring Location Sketch

Depth (Feet)	Sample Interval	Blow Counts	PID (ppm) B-zone/stem/sample	Water Level	Well Construction	Lithology / USCS	DESCRIPTION
5							Poorly graded sand; loose; dark brown & dark gray; dry; mostly sand; trace fines.
15							Silty sand; med. stiff; dark gray; damp; mostly sand, fine; 10% fines; med. plasticity
25							Poorly graded sand; loose; gray to dark gray; moist, mostly sand, fine; 15% fines.
35							Poorly graded sand; loose; light brown and gray; dry; mostly sand, fine; trace fines.

Casing Diameter _____ Casing Length _____ From _____ To _____

Screen Size _____ Screen Length _____ From _____ To _____

Sand Type _____ From _____ To _____

Bentonite Type _____ From _____ To _____

Cement/Grout _____ From _____ To _____

Surface Completion _____

ITSI Innovative Technical Solutions, Inc.

Gilbane

Soils Log Form

Boring No.: JW-SB/S407

Project: JERVIS WEBB | Project No.: J163007200 | Page 1 of 2

Client: US EPA | Start Date: 3/12/15 | Logged By: PJ PHILLIPS

Location: SOUTH GATE, CA. | Completion Date: 3/12/15 | Reviewed By:

Depth	Sampled Interval: Driven	Blows /	Recovery	OVA: PID / FID	Grain Size & Distribution (to nearest 5 %): % fines	% sand: f	m	c	% gravel: f	c	max size	Remarks: Visual/Manual description of soil (ASTM D 2488 / USBR 5005). Description shall provide enough information so that a reviewer can understand the basis of the classification. Include also: Sample IDs; Start/Stop Times; Drilling data, Water levels, Other comments.	Group Symbol	Well Const.: Annulus	Casing
0.5	X											0.5 DARK BROWN (7.5YR 3/3) SILTY SAND / SANDY SILT, VERY FINE TO FINE GRAINED; MOIST; NO CEMENTATION; WELL TO MODERATELY WELL ROUNDED; WELL SORTED, MINERALOGY: CLEAR AND MILKY QUARTZ, BIOTITE; PYRITE; ULTRA MAFICS	SM		
2.0												2.0 LIGHT OLIVE BROWN (2.5Y 5/3) FINE TO MEDIUM GRAINED SAND, SLIGHTLY MOIST; WELL ROUNDED TO SUB-ANGULAR MINERALOGY: CLEAR, FROSTED, MILKY AND SMOKEY QUARTZ; BIOTITE; PYRITE; CHERT; FELDSPAR	SP		
5.0												5.0 DARK BROWN (10YR 3/3) SILTY, V/VERY FINE GRAINED SAND, ROUND TO TO SUB-ANGULAR; MOIST, WELL SORTED MINERALOGY: CLEAR AND MILKY QUARTZ; BIOTITE; PYRITE	SM		
15.0												15.0 DARK GRAYISH BROWN (2.5Y 4/2) VERY FINE GRAINED SAND, ROUND; MOIST; WELL SORTED MINERALOGY: CLEAR AND MILKY QUARTZ; BIOTITE; PYRITE	SP		
25.0												25.0 DARK GRAYISH BROWN (10YR 4/2) SILTY VERY FINE GRAINED SAND. ROUND TO SUB ROUND; MOIST; VERY WELL SORTED / POORLY GRADED; WEAKLY CEMENTED MINERALOGY: CLEAR, MILKY AND FROSTED QUARTZ; BIOTITE; PYRITE; ULTRA MAFICS	SM		
35.0												35.0 GRAYISH BROWN (2.5Y 5/2) TO LIGHT OLIVE BROWN (2.5Y 5/3) VERY FINE TO MEDIUM GRAINED SAND.	SP		

Signature (logging geologist): [signature] Date: 3/12/15

Signature (reviewer): Date:

Gilbane

Soils Log Form

Boring No.	JW-SB/SG07

Project: JERVIS WEBB Project No.: J163007200 Page 2 of 2

Client: USEPA Start Date: 3/12/15 Logged By: PJPHILLIPS

Location: SOUTH GATE Completion Date: 3/12/15 Reviewed By:

Depth	Sampled Interval: Driven	Sampled Interval: Blows /	Sampled Interval: Recovery	OVA: __PID __FID	Grain Size & Distribution (to nearest 5 %): % fines	% sand: f	% sand: m	% sand: c	% gravel: f	% gravel: c	max size	Remarks: Visual/Manual description of soil (ASTM D 2488 / USBR 5005). Description shall provide enough information so that a reviewer can understand the basis of the classification. Include also: Sample IDs; Start/Stop Times; Drilling data, Water levels, Other comments.	Group Symbol	Well Const.: Annulus	Well Const.: Casing
												ROUND TO SUBANGULAR; SLIGHTLY MOIST; MODERATELY SORTED. MINERALOGY: CLEAR, FROSTED AND MILKY QUARTZ; BIOTITE; PYRITE; POTASSIUM FELDSPAR; RED CHERT; ULTRA MAFICS			

Signature (logging geologist): _____ Date: _____

Signature (reviewer): _____ Date: _____

Gilbane

Soils Log Form

Boring No.: JW-SB/SG08

Project: JERVIS WEBB | Project No.: J163007CCO | Page 1 of 1

Client: U.S. EPA | Start Date: 3/12/15 | Logged By: P.J. PHILLIPS

Location: SOUTH GATE, CA. | Completion Date: 3/12/15 | Reviewed By:

Depth	Sampled Interval: Driven	Blows /	Recovery	OVA: PID / FID	Grain Size & Distribution (to nearest 5 %): % fines	% sand: f	m	c	% gravel: f	c	max size	Remarks: Visual/Manual description of soil (ASTM D 2488 / USBR 5005). Description shall provide enough information so that a reviewer can understand the basis of the classification. Include also: Sample IDs; Start/Stop Times; Drilling data, Water levels, Other comments.	Group Symbol	Well Const.: Annulus	Casing
—	X											0.5 VERY DARK GRAYISH BROWN (10YR 3/2) SILTY SAND, SUB-ANGULAR TO ROUND, MOIST, MODERATELY SORTED MINERALOGY: QUARTZ; BIOTITE; PYRITE; ULTRA MAFICS	SM		
0.5															
—															
2.0												1.0 GRAYISH BROWN (2.5Y 5/2) FINE TO MEDIUM GRAINED SAND, SUB-ANGULAR TO SUB-ROUND, MOIST; MODERATELY SORTED MINERALOGY: QUARTZ; BIOTITE; PYRITE; POTASSIUM FELDSPAR	SP		
—															
—															
—															
5.0												5.0 VERY DARK GRAYISH BROWN (2.5Y 3/2) SILTY SAND/SANDY SILT. VERY FINE GRAINED; WELL ROUNDED, VERY MOIST, WELL SORTED.	SM		
—															
15.0												15.0 SAME AS ABOVE WITH INCREASE IN SILT			
—															
25.0												25.0 DARK GRAY (2.5Y 4/1) SILTY VERY FINE GRAINED SAND, WELL ROUNDED; MOIST TO VERY MOIST; VERY WELL SORTED MINERALOGY: QUARTZ, BIOTITE; PYRITE; MAFICS; ULTRA MAFICS	SM		
—															
35.0												35.0 LIGHT OLIVE BROWN (2.5Y 3/4) FINE TO MEDIUM GRAINED SAND. ROUND TO SUB-ANGULAR; SLIGHTLY MOIST; MODERATELY SORTED MINERALOGY: CLEAR, FROSTED SMOKEY AND MILKY QUARTZ; BIOTITE; POTASSIUM FELDSPAR; PYRITE; GREEN AND RED CHERT	SP		
—															
—															
—															
—															
—															

Signature (logging geologist): [signature] Date: 3/12/15

Signature (reviewer): Date:

Gilbane

Soils Log Form

Boring No.	JW-SB/SG09

Project: Jervis Webb Project No.: J163007200 Page 1 of 1

Client: U.S. EPA Start Date: 3/19/15 Logged By: P. J. Phillips

Location: South Gate, Ca. Completion Date: 3/19/15 Reviewed By:

Depth	Sampled Interval: Driven	Sampled Interval: Blows /	Sampled Interval: Recovery	OVA (__PID __FID)	Grain Size & Distribution (to nearest 5 %): % fines	% sand: f	% sand: m	% sand: c	% gravel: f	% gravel: c	max size	Remarks: Visual/Manual description of soil (ASTM D 2488 / USBR 5005). Description shall provide enough information so that a reviewer can understand the basis of the classification. Include also: Sample IDs; Start/Stop Times; Drilling data, Water levels, Other comments.	Group Symbol	Well Const.: Annulus	Well Const.: Casing
	X														
0.5												0.5 DARK BROWN (10YR 3/3) VERY FINE TO MEDIUM GRAINED SAND. WELL ROUNDED TO SUB-ANGULAR; MOIST; MODERATELY SORTED MINERALOGY: CLEAR, SMOKEY AND FROSTED QUARTZ; BIOTITE; PYRITE; ULTRA MAFICS	SW		
2.0												2.0 LIGHT OLIVE BROWN (2.5Y 5/3) VERY FINE TO MEDIUM GRAINED SAND. WELL ROUNDED TO SUB-ANGULAR, VERY SLIGHTLY MOIST; MODERATELY SORTED MINERALOGY: CLEAR, MILKY AND FROSTED QUARTZ; BIOTITE, PYRITE, CHERT	SP		
5.0												5.0 VERY DARK GRAYISH BROWN (2.5Y 3/2) SLIGHTLY CLAYEY; SILTY VERY FINE GRAINED SAND, ROUND TO SUB-ANGULAR; MOIST MINERALOGY: CLEAR, MILKY, FROSTED AND SMOKEY QUARTZ; BIOTITE, PYRITE; CHERT; ULTRA MAFICS	SM/SC		
15.0												15.0 SAME AS ABOVE WITH INCREASE IN SILT			
25.0												25.0 SAME AS ABOVE			
35.0												35.0 LIGHT YELLOWISH BROWN (2.5Y 6/3) SILTY FINE TO MEDIUM GRAINED SAND. SUB-ROUND TO SUB-ANGULAR, SLIGHTLY MOIST; MODERATELY-WELL SORTED MINERALOGY: MILKY, CLEAR AND SMOKEY QUARTZ; BIOTITE, PYRITE, IRON STAINING OBSERVED	SM		

Signature (logging geologist): R. J. Phillips Date: 3/19/15

Signature (reviewer): Date:

Gilbane

Soils Log Form

Boring No.	JW-SB/SG 10

Project: Jervis Webb Project No.: J163007200 Page 1 of 1

Client: U.S. EPA Start Date: 3/11/15 Logged By: P. J. Phillips

Location: South Gate, Ca. Completion Date: 3/11/15 Reviewed By:

Depth	Sampled Interval: Driven	Sampled Interval: Blows /	Sampled Interval: Recovery	OVA (PID / FID)	Grain Size & Distribution (to nearest 5 %): % fines	% sand: f	% sand: m	% sand: c	% gravel: f	% gravel: c	max size	Remarks: Visual/Manual description of soil (ASTM D 2488 / USBR 5005). Description shall provide enough information so that a reviewer can understand the basis of the classification. Include also: Sample IDs; Start/Stop Times; Drilling data, Water levels, Other comments.	Group Symbol	Well Const.: Annulus	Well Const.: Casing
	x											4 INCH THICK CONCRETE FLOOR			
0.5												0.5 BROWN (10YR 4/3) SILTY, VERY FINE TO COARSE GRAINED SAND. ANGULAR TO SUB-ROUND; MOIST MINERALOGY: CLEAR AND MILKY QUARTZ APPEARS TO BE SUB BASE BENEATH FLOOR	SW		
2.0												2.0 SAME AS ABOVE; SUB-BASE FILL MATERIAS			
5.0												5.0 VERY DARK BROWN (10YR 2/2) SILTY SAND/SANDY SILT. VERY FINE GRAINED TO FINE GRAINED. WELL ROUNDED; MOIST; WELL SORTED MINERALOGY: CLEAR QUARTZ; PYRITE, BIOTITE; ULTRAMAFICS, POTASSIUM FELDSPAR, CHERT	SM		
15.0												15.0 DARK BROWN (10YR 3/3) SILTY VERY FINE GRAINED SAND/SANDY SILT. WELL ROUNDED; SLIGHTLY MOIST; WELL SORTED	SM		
25.0												25.0 SAME AS ABOVE WITH DECREASE IN SILT			
35.0												35.0 OLIVE BROWN (2.5Y 4/3) SILTY VERY FINE GRAINED TO MEDIUM GRAINED SAND. WELL ROUNDED TO SUB-ANGULAR; MOIST; MODERATELY SORTED MINERALOGY: CLEAR, MILKY, FROSTED AND SMOKED QUARTZ; BIOTITE, PYRITE, POTASSIUM FELDSPAR; GREEN AND RED CHERT; ULTRAMAFICS	SM		

Signature (logging geologist): P. J. Phillips Date: 3/11/15

Signature (reviewer): Date:

Gilbane

Soils Log Form

Boring No.	JW-SB/SG 11

Project: Jervis Webb Project No.: J163007200 Page 1 of 1

Client: U.S. EPA Start Date: 3/9/15 Logged By: P. J. Phillips

Location: South Gate, Ca. Completion Date: 3/9/15 Reviewed By:

Depth	Sampled Interval: Driven	Sampled Interval: Blows /	Sampled Interval: Recovery	OVA (__PID __FID)	Grain Size & Distribution (to nearest 5 %): % fines	% sand: f	% sand: m	% sand: c	% gravel: f	% gravel: c	max size	Remarks: Visual/Manual description of soil (ASTM D 2488 / USBR 5005). Description shall provide enough information so that a reviewer can understand the basis of the classification. Include also: Sample IDs; Start/Stop Times; Drilling data, Water levels, Other comments.	Group Symbol	Well Const.: Annulus	Well Const.: Casing
	x														
0.5												0.5 DARK YELLOWISH BROWN (10YR 3/4) FINE TO MEDIUM GRAINED SAND. WELL-ROUNDED TO SUB-ROUND; MOIST; MODERATELY SORTED. MINERALOGY: CLEAR, MILKY AND SMOKEY QUARTZ; BIOTITE, PYRITE, ULTRA MAFICS	SP		
2.0												2.0 SAME AS ABOVE			
5.0												5.0 VERY DARK GRAYISH BROWN (10YR 3/2) MEDIUM GRAINED SAND, WELL ROUNDED TO SUB-ANGULAR; MOIST; VERY WELL SORTED. MINERALOGY; CLEAR, MILKY, SMOKEY QUARTZ; BIOTITE; PYRITE; CHERT; ULTRA MAFICS	SP		
15.0												15.0 DARK GRAYISH BROWN (10YR 4/2) SILTY VERY FINE TO MEDIUM GRAINED SAND. WELL ROUNDED; MOIST; POORLY SORTED. MINERALOGY: CLEAR AND MILKY QUARTZ; BIOTITE, PYRITE	SM		
25.0												25.0 DARK GRAYISH BROWN (2.5Y 4/2) SILTY, SLIGHTLY CLAYEY VERY FINE TO MEDIUM GRAINED SAND, WELL TO SUB-ROUND; VERY MOIST, MINERALOGY; CLEAR, SMOKEY AND MILKY QUARTZ; BIOTITE; PYRITE; CHERT; ULTRA MAFICS	SM/SC		
35.0												35.0 LIGHT YELLOWISH BROWN (2.5Y 6/4) FINE TO MEDIUM GRAINED SAND, MODERATELY WELL ROUNDED; SLIGHTLY MOIST; WELL SORTED. MINERALOGY: CLEAR, MILKY AND SMOKEY QUARTZ; BIOTITE; PYRITE, ULTRA MAFICS WITH IRON STAINING	SP		

Signature (logging geologist): _____ Date: 3/9/15

Signature (reviewer): _____ Date: _____

Gilbane

Soils Log Form

Boring No.	JW-SB/SG\2

Project: Jervis Webb Project No.: J163007200 Page 1 of 1

Client: U.S. EPA Start Date: 3/16/15 Logged By: P. J. Phillips

Location: South Gate, Ca. Completion Date: 3/16/15 Reviewed By:

Depth	Sampled Interval: Driven	Sampled Interval: Blows/	Sampled Interval: Recovery	OVA (__PID __FID)	Grain Size & Distribution (to nearest 5 %): % fines	% sand: f	% sand: m	% sand: c	% gravel: f	% gravel: c	max size	Remarks: Visual/Manual description of soil (ASTM D 2488 / USBR 5005). Description shall provide enough information so that a reviewer can understand the basis of the classification. Include also: Sample IDs; Start/Stop Times; Drilling data, Water levels, Other comments.	Group Symbol	Well Const.: Annulus	Well Const.: Casing
	X											3 INCH THICK CONCRETE FLOOR			
0.5												0.5 DARK BROWN (2.5Y 3/2) SILTY, VERY FINE TO MEDIUM GRAINED SAND, ROUND TO SUB-ANGULAR; MOIST; MODERATELY-WELL SORTED MINERALOGY: CLEAR AND MILKY QUARTZ, BIOTITE; PYRITE; ULTRAMAFICS; CHERT	SM		
2.0												2.0 DARK GRAY (10YR 3/1) SILTY SAND / SANDY SILT, WELL ROUNDED; SLIGHTLY MOIST	SM		
5.0												5.0 VERY DARK BROWN (10YR 2/2) SILTY VERY FINE TO MEDIUM GRAINED SAND. ROUND TO SUB-ANGULAR; MOIST; VERY WELL SORTED. MINERALOGY: CLEAR, FROSTED AND MILKY QUARTZ; BIOTITE; PYRITE; ULTRAMAFICS	SM		
15.0												15.0 DARK GRAYISH BROWN (10YR 4/2) SILTY VERY FINE GRAINED SAND. WELL ROUNDED TO ROUND; MOIST TO VERY MOIST; VERY WELL SORTED MINERALOGY: CLEAR, MILKY AND FROSTED QUARTZ; BIOTITE; PYRITE; CHERT; POTASSIUM FELDSPAR	SM		
25.0												25.0 SAME AS ABOVE WITH COLOR GRADATION TO DARK GRAY (2.5Y 4/1) MOIST			
35.0												35.0 GRAYISH BROWN (2.5Y 5/2) FINE TO MEDIUM GRAINED SAND, ROUND TO SUB-ANGULAR; VERY SLIGHTLY MOIST; MODERATELY-WELL SORTED. MINERALOGY: CLEAR, FROSTED AND MILKY QUARTZ; BIOTITE; PYRITE; RED AND GREEN CHERT, ULTRAMAFICS	SW		

Signature (logging geologist): _____ Date: 3/16/15

Signature (reviewer): _____ Date: _____

Gilbane

Soils Log Form

Boring No.	JW-SB/SG 13

Project: Jervis Webb Project No.: J163007200 Page 1 of 1

Client: U.S. EPA Start Date: 3/12/15 Logged By: P. J. Phillips

Location: South Gate, Ca. Completion Date: 3/12/15 Reviewed By:

Depth	Sampled Interval: Driven	Sampled Interval: Blows /	Sampled Interval: Recovery	OVA (__PID __FID)	Grain Size & Distribution (to nearest 5 %): % fines	% sand: f	% sand: m	% sand: c	% gravel: f	% gravel: c	max size	Remarks: Visual/Manual description of soil (ASTM D 2488 / USBR 5005). Description shall provide enough information so that a reviewer can understand the basis of the classification. Include also: Sample IDs; Start/Stop Times; Drilling data, Water levels, Other comments.	Group Symbol	Well Const.: Annulus	Well Const.: Casing
	x														
0.5												0.5 DARK GRAYISH BROWN (2.5Y 4/2) SILTY SAND / SANDY SILT, VERY FINE GRAINED; WELL ROUNDED; MOIST; WELL SORTED MINERALOGY: QUARTZ AND BIOTITE	SM		
2.0												2.0 LIGHT OLIVE BROWN (2.5Y 5/4) VERY FINE GRAINED SAND. WELL ROUNDED; SLIGHTLY MOIST; VERY WELL SORTED. MINERALOGY: CLEAR, FROSTED MILKY AND SMOKEY QUARTZ; BIOTITE; PYRITE, POTASSIUM FELDSPAR; ULTRA MAFICS	SW		
5.0												5.0 VERY DARK BROWN (10YR 2/2) SILTY, VERY FINE TO MEDIUM GRAINED SAND. ROUND TO SUB-ANGULAR; MOIST; MODERATELY-WELL SORTED. MINERALOGY: QUARTZ; BIOTITE; PYRITE ULTRA MAFICS	SM		
15.0												15.0 DARK GRAYISH BROWN (10 YR 4/2) SILTY SAND / SANDY SILT, VERY FINED GRAINED; WELL ROUNDED. VERY MOIST TO WET; VERY WELL SORTED MINERALOGY: QUARTZ.; BIOTITE; PYRITE; ULTRA MAFICS	SM		
25.0												25.0 GRAYISH BROWN (10YR 5/2) SILT, FIRM; WEAKLY CEMENTED; SLOW DILATANCY	ML		
35.0												35.0 LIGHT YELLOWISH BROWN (2.5Y 6/3) VERY FINE TO MEDIUM GRAINED SAND, WELL ROUNDED TO SUB-ANGULAR; SLIGHTLY MOIST; MODERATELY SORTED MINERALOGY: CLEAR, MILKY, FROSTED AND SMOKEY QUARTZ; PYRITE; BIOTITE; ULTRA MAFICS, POTASSIUM FELDSPAR; GREEN AND RED CHERT	SW		

Signature (logging geologist): _____ Date: 3/12/15

Signature (reviewer): _____ Date: _____

Gilbane

Soils Log Form

Boring No.	JW-SB/SG 14

Project: Jervis Webb Project No.: J163007200 Page 1 of 1

Client: U.S. EPA Start Date: 3/13/15 Logged By: P. J. Phillips

Location: South Gate, Ca. Completion Date: 3/13/15 Reviewed By:

Depth	Sampled Interval: Driven	Sampled Interval: Blows /	Sampled Interval: Recovery	OVA (__PID __FID)	Grain Size & Distribution (to nearest 5 %): % fines	% sand: f	% sand: m	% sand: c	% gravel: f	% gravel: c	max size	Remarks: Visual/Manual description of soil (ASTM D 2488 / USBR 5005). Description shall provide enough information so that a reviewer can understand the basis of the classification. Include also: Sample IDs; Start/Stop Times; Drilling data, Water levels, Other comments.	Group Symbol	Well Const.: Annulus	Well Const.: Casing
	x											4 INCH THICK CONCRETE FLOOR			
0.5												0.5 BROWN (7.5YR 4/2) VERY COARSE GRAINED SAND. ANGULAR; MOIST; POORLY SORTED MINERALOGY: QUARTZ; POTASSIUM FELDSPAR; BIOTITE; PYRITE	SW		
2.0												2.0 DARK GRAYISH BROWN (2.5Y4/2) VERY FINE TO MEDIUM GRAINED SAND, ROUNDS TO SUB-ANGULAR; SLIGHTLY MOIST; MODERATELY SORTED MINERALOGY: CLEAR, MILKY, FROSTED QUARTZ; BIOTITE; PYRITE; CHERT	SW		
5.0												5.0 VERY DARK GRAYISH BROWN (10YR 3/2) SILTY VERY FINE GRAINED SAND, ROUND TO SUB-ROUND; MOIST; MODERATELY-WELL SORTED MINERALOGY; CLEAR, MILKY, SMOKEY QUARTZ; BIOTITE; PYRITE; ULTRAMAFIC	SM		
15.0												15.0 DARK GRAY (2.5Y 4/1) SILTY SAND/SANDY SILT. VERY FINE GRAINED; ROUND TO SUB-ROUND; MOIST	SM		
25.0												25.0 SAME AS ABOVE WITH INCREASE IN VERY FINE GRAINED SAND, VERY MOIST TO WET			
35.0												35.0 GRAYISH BROWN (2.5Y 5/2) TO LIGHT OLIVE BROWN (2.5Y 5/3) FINE TO MEDIUM GRAINED SAND. ROUND TO SUB-ANGULAR; MOIST; MODERATELY-WELL SORTED MINERALOGY: CLEAR, MILKY, FROSTED, SMOKEY QUARTZ; BIOTITE; PYRITE; POTASSIUM FELDSPAR; RED AND GREEN CHERT	SW		

Signature (logging geologist): [signature] Date: 3/13/15

Signature (reviewer): Date:

Gilbane

Soils Log Form

Boring No.	JW-SB/SG15

Project: Jervis Webb Project No.: J163007200 Page 1 of 1

Client: U.S. EPA Start Date: 3/13/15 Logged By: P. J. Phillips

Location: South Gate, Ca. Completion Date: 3/13/15 Reviewed By:

Depth	Sampled Interval: Driven	Sampled Interval: Blows /	Sampled Interval: Recovery	OVA (__PID __FID)	Grain Size & Distribution (to nearest 5 %): % fines	% sand: f	% sand: m	% sand: c	% gravel: f	% gravel: c	max size	Remarks: Visual/Manual description of soil (ASTM D 2488 / USBR 5005). Description shall provide enough information so that a reviewer can understand the basis of the classification. Include also: Sample IDs; Start/Stop Times; Drilling data, Water levels, Other comments.	Group Symbol	Well Const.: Annulus	Well Const.: Casing
	x											4 INCH THICK CONCRETE FLOOR			
0.5												0.5 DARK GRAYISH BROWN (10YR 4/2) FINE TO MEDIUM GRAINED SAND. ROUND TO SUB-ANGULAR; MOIST TO VERY MOIST; MODERATELY SORTED MINERALOGY; CLEAR AND MILKY QUARTZ, BIOTITE; PYRITE; CHERT; ULTRA MAFICS	SW		
2.0												2.0 SAME AS ABOVE WITH INCREASE IN FINE TO VERY FINE GRAINED SAND AND SILT			
5.0												5.0 VERY DARK GRAYISH BROWN (10YR 3/2) SILTY VERY FINE TO MEDIUM GRAINED SAND, ROUND TO SUB-ROUND; MOIST MINERALOGY: QUARTZ; BIOTITE; PYRITE; ULTRA MAFICS	SW		
15.0												15.0 DARK GRAY (2.5Y 4/1) SILTY SAND/SANDY SILT VERY FINE GRAINED, MOIST TO VERY MOIST MINERALOGY; CLEAR AND MILKY QUARTZ, BIOTITE; PYRITE; MAFICS	SM		
25.0												25.0 SAME AS ABOVE WITH INCREASE IN VERY FINE TO FINE GRAINED SAND. ROUND; MOIST TO VERY MOIST; MODERATELY-WELL SORTED			
35.0												35.0 GRAYISH BROWN (2.5Y 5/2) FINE TO MEDIUM GRAINED SAND, ROUND TO SUB-ANGULAR; MOIST; MODERATELY-WELL SORTED MINERALOGY: CLEAR, MILKY, FROSTED, SMOKEY QUARTZ; BIOTITE. PYRITE. MAFICS; RED AND GREEN CHERT; POTASSIUM FELDSPAR	SM		

Signature (logging geologist): P. J. Phillips Date: 3/13/15

Signature (reviewer): Date:

Gilbane

Soils Log Form

Boring No.	JW-SB/SG 16

Project: Jervis Webb Project No.: J163007200 Page 1 of 1

Client: U.S. EPA Start Date: 3/10/15 Logged By: P. J. Phillips

Location: South Gate, Ca. Completion Date: 3/10/15 Reviewed By:

Depth	Sampled Interval: Driven	Sampled Interval: Blows /	Sampled Interval: Recovery	OVA (PID / FID)	Grain Size & Distribution (to nearest 5 %): % fines	% sand: f	% sand: m	% sand: c	% gravel: f	% gravel: c	max size	Remarks: Visual/Manual description of soil (ASTM D 2488 / USBR 5005). Description shall provide enough information so that a reviewer can understand the basis of the classification. Include also: Sample IDs; Start/Stop Times; Drilling data, Water levels, Other comments.	Group Symbol	Well Const.: Annulus	Well Const.: Casing
	X														
0.5												0.5 DARK BROWN (10YR 3/3) FINE TO MEDIUM GRAINED SAND. WELL ROUNDED, SLIGHTLY MOIST; MODERATELY-WELL SORTED, MINERALOGY: CLEAR, SMOKEY, MILKY QUARTZ; CHERT WITH IRON STAINING; BIOTITE; PYRITE	SW		
2.0												2.0 SAME AS ABOVE			
5.0												5.0 SAME AS ABOVE			
15.0												15.0 BROWN (10YR 4/3) MEDIUM GRAINED SAND. WELL ROUNDED TO SUB-ANGULAR; MOIST; MODERATELY SORTED. MINERALOGY: CLEAR, SMOKEY, MILKY QUARTZ; BIOTITE; PYRITE; POTASSIUM FELDSPAR, CHERT WITH IRON STAINING	SW		
25.0												25.0 DARK GRAYISH BROWN (2.5Y 4/2) SILTY SAND / SANDY SILT. VERY FINE GRAINED; WELL ROUNDED; VERY MOIST. VERY WELL SORTED, MINERALOGY: QUARTZ; POTASSIUM FELDSPAR; BIOTITE; CHERT; PYRITE	SP		
35.0												35.0 GRAYISH BROWN (2.5 5/2) VERY FINE TO MEDIUM GRAINED. WELL ROUNDED TO SUB-ANGULAR; MOIST TO VERY MOIST. MINERALOGY: CLEAR, FROSTED, MILKY, SMOKEY QUARTZ; BIOTITE; PYRITE; POTASSIUM FELDSPAR; GREEN AND RED CHERT	SW		

Signature (logging geologist): P. J. Phillips Date: 3/10/15

Signature (reviewer): Date:

Gilbane

Soils Log Form

Boring No.	JW-SB/SG 17

Project: Jervis Webb Project No.: J163007200 Page 1 of 2

Client: U.S. EPA Start Date: 3/10/15 Logged By: P. J. Phillips

Location: South Gate, Ca. Completion Date: 3/10/15 Reviewed By:

Depth	Sampled Interval: Driven	Sampled Interval: Blows /	Sampled Interval: Recovery	OVA (PID / FID)	Grain Size & Distribution (to nearest 5 %): % fines	% sand: f	% sand: m	% sand: c	% gravel: f	% gravel: c	max size	Remarks: Visual/Manual description of soil (ASTM D 2488 / USBR 5005). Description shall provide enough information so that a reviewer can understand the basis of the classification. Include also: Sample IDs; Start/Stop Times; Drilling data, Water levels, Other comments.	Group Symbol	Well Const.: Annulus	Well Const.: Casing
	X														
0.5												0.5 DARK BROWN (10 YR 3/3) VERY FINE TO MEDIUM GRAINED SAND. SUB-ANGULAR TO ROUND; MOIST; MODERATELY-WELL SORTED. MINERALOGY: CLEAR AND MILKY QUARTZ; BIOTITE; PYRITE; CHERT, ULTRA MAFICS	SW		
2.0												2.0 SAME AS ABOVE; VERY SLIGHTLY MOIST; WELL SORTED			
5.0												5.0 VERY DARK GRAYISH BROWN (10YR 3/2) VERY FINE TO MEDIUM GRAINED SAND, WELL ROUNDED TO SUB-ANGULAR; MOIST; MODERATELY SORTED MINERALOGY: CLEAR AND MILKY QUARTZ; BIOTITE; PYRITE; POTASSIUM FELDSPAR; CHERT	SW		
15.0												15.0 LIGHT OLIVE BROWN (2.5 5/3) SILTY VERY FINE TO MEDIUM GRAINED SAND. WELL ROUNDED TO SUB-ANGULAR; MODERATELY SORTED. MINERALOGY: CLEAR AND MILKY QUARTZ; GREEN AND RED CHERT; BIOTITE; PYRITE	SW		
25.0												25.0 VERY DARK GRAYISH BROWN (2.5 Y 3/2) VERY FINE TO MEDIUM GRAINED SAND, SUB-ANGULAR TO ROUND; MOIST; MODERATELY SORTED	SW		
												MINERALOGY; CLEAR, FROSTED, MILKY QUARTZ; BIOTITE; PYRITE; ULTRA MAFICS			
35.0												35.0 DARK OLIVE GRAY (5 Y 3/2) SILTY SAND/ SANDY SILT. VERY MOIST; FIRM; SLOW DILATANCY	SM		
45.0												45.0 DARK GRAYISH BROWN (10YR 4/2) SILTY VERY FINE GRAINED SAND. ROUND TO WELL ROUND; VERY MOIST.	SM		

Signature (logging geologist): _____ Date: 3/10/15

Signature (reviewer): _____ Date: _____

Gilbane

Soils Log Form

Boring No.	JW-SB/SG 17

Project: Jervis Webb Project No.: J163007200 Page 2 of 2

Client: U.S. EPA Start Date: 3/10/15 Logged By: P. J. Phillips

Location: South Gate, Ca. Completion Date: 3/10/15 Reviewed By:

Depth	Sampled Interval: Driven	Sampled Interval: Blows /	Sampled Interval: Recovery	OVA (__PID __FID)	Grain Size & Distribution (to nearest 5 %): % fines	% sand: f	% sand: m	% sand: c	% gravel: f	% gravel: c	max size	Remarks: Visual/Manual description of soil (ASTM D 2488 / USBR 5005). Description shall provide enough information so that a reviewer can understand the basis of the classification. Include also: Sample IDs; Start/Stop Times; Drilling data, Water levels, Other comments.	Group Symbol	Well Const.: Annulus	Well Const.: Casing
	x											VERY WELL SORTED			
60.0												60.0 SAME AS ABOVE WITH A INCREASE IN SILT AND PRESENCE OF CLAY; VERY MOIST TO WET; SLOW DILATANCY			

Signature (logging geologist): P. J. Phillips Date: 3/10/15

Signature (reviewer): Date:

Gilbane

Soils Log Form

Boring No.	JW-SB/SG 18

Project: Jervis Webb Project No.: J163007200 Page 1 of 2

Client: U.S. EPA Start Date: 3/11/15 Logged By: P. J. Phillips

Location: South Gate, Ca. Completion Date: 3/11/15 Reviewed By:

Depth	Sampled Interval: Driven	Sampled Interval: Blows /	Sampled Interval: Recovery	OVA: PID / FID	Grain Size & Distribution (to nearest 5 %): % fines	% sand: f	% sand: m	% sand: c	% gravel: f	% gravel: c	max size	Remarks: Visual/Manual description of soil (ASTM D 2488 / USBR 5005). Description shall provide enough information so that a reviewer can understand the basis of the classification. Include also: Sample IDs; Start/Stop Times; Drilling data, Water levels, Other comments.	Group Symbol	Well Const.: Annulus	Well Const.: Casing
	X											0.5 DARK BROWN (7.5 YR 3/2) VERY FINE TO MEDIUM GRAINED SAND. MODERATELY WELL ROUNDED TO SUB-ANGULAR; SLIGHTLY MOIST. MODERATELY SORTED. VERY MINOR AMOUNTS OF VERY COARSE GRAINED SAND TO GRANULE GRAVEL SIZED ROCK FRAGMENTS. MINERALOGY: CLEAR AND MILKY QUARTZ; BIOTITE; PYRITE	SP		
2.0												2.0 OLIVE BROWN (2.5 Y 4/3) FINE TO MEDIUM GRAINED SAND. WELL ROUNDED TO SUB-ANGULAR; MODERATELY SORTED MINERALOGY: CLEAR, MILKY, FROSTED AND SMOKEY QUARTZ; BIOTITE; PYRITE; POTASSIUM FELDSPAR; GREEN AND RED CHERT; ULTRAMAFICS	SW		
5.0												5.0 VERY DARK BROWN (10 YR 2/2) SILTY VERY FINE TO MEDIUM GRAINED SAND. ROUND TO SUB-ANGULAR; MODERATELY-WELL SORTED. MINERALOGY: CLEAR, SMOKEY AND MILKY QUARTZ; PYRITE; BIOTITE; CHERT	SP		
15.0												15.0 DARK YELLOWISH BROWN (10 YR 3/4) TO DARK BROWN (10 YR 3/3) SILTY SAND / SANDY SILT. VERY FINE GRAINED; WELL ROUNDED; WELL SORTED. MINERALOGY: QUARTZ; BIOTITE; PYRITE	SM		
25.0												25.0 DARK GRAYISH BROWN (2.5 Y 4/2) SILTY SAND / SANDY SILT MINERALOGY: QUARTZ; BIOTITE; PYRITE	SM		
35.0												35.0 GRAYISH BROWN (2.5 Y 5/2) FAIR TO MEDIUM GRAINED SAND. WELL ROUNDED TO SUB-ANGULAR; VERY MOIST; MODERATELY-WELL SORTED. MINERALOGY: CLEAR, MILKY, FROSTED			

Signature (logging geologist): _____ Date: 3/11/15

Signature (reviewer): _____ Date: _____

Gilbane

Soils Log Form

Boring No.	JW-SB/SG 18

Project: Jervis Webb Project No.: J163007200 Page 2 of 2

Client: U.S. EPA Start Date: 3/11/15 Logged By: P. J. Phillips

Location: South Gate, Ca. Completion Date: 3/11/15 Reviewed By:

Depth	Sampled Interval: Driven	Sampled Interval: Blows /	Sampled Interval: Recovery	OVA: PID / FID	Grain Size & Distribution (to nearest 5 %): % fines	% sand: f	% sand: m	% sand: c	% gravel: f	% gravel: c	max size	Remarks: Visual/Manual description of soil (ASTM D 2488 / USBR 5005). Description shall provide enough information so that a reviewer can understand the basis of the classification. Include also: Sample IDs; Start/Stop Times; Drilling data, Water levels, Other comments.	Group Symbol	Well Const.: Annulus	Well Const.: Casing
	x											AND SMOKEY QUARTZ, BIOTITE, PYRITE, POTASSIUM FELDSPAR, IRON STAINED GREEN AND RED CHERT			

Signature (logging geologist): P. J. Phillips Date: 3/11/15

Signature (reviewer): Date:

Gilbane

Soils Log Form

Boring No.	JW-SB/SG 19

Project: Jervis Webb | Project No.: J163007200 | Page 1 of 1

Client: U.S. EPA | Start Date: 3/9/15 | Logged By: P. J. Phillips

Location: South Gate, Ca. | Completion Date: 3/9/15 | Reviewed By:

Depth	Sampled Interval: Driven	Sampled Interval: Blows /	Sampled Interval: Recovery	OVA (__PID __FID)	Grain Size & Distribution (to nearest 5 %): % fines	% sand: f	% sand: m	% sand: c	% gravel: f	% gravel: c	max size	Remarks: Visual/Manual description of soil (ASTM D 2488 / USBR 5005). Description shall provide enough information so that a reviewer can understand the basis of the classification. Include also: Sample IDs; Start/Stop Times; Drilling data, Water levels, Other comments.	Group Symbol	Well Const.: Annulus	Well Const.: Casing
	x														
0.5												0.5 DARK GRAYISH BROWN (10YR 4/2) SILTY SAND. FINE TO MEDIUM GRAINED; SUB-ANGULAR TO ROUND; MOIST; MODERATELY WELL SORTED MINERALOGY: MILKY AND CLEAR QUARTZ; BIOTITE; PYRITE; CHERT; ULTRA MAFICS	SM		
2.0												2.0 SAME AS ABOVE WITH IRON STAINING OF CHERT			
5.0												5.0 BROWN (10YR 5/3) SLIGHTLY SILTY SAND. FINE TO MEDIUM GRAINED; SLIGHTLY MOIST; VERY WELL SORTED. MINERALOGY: CLEAR, MILKY AND SMOKEY QUARTZ; BIOTITE; PYRITE; IRON STAINED RED AND GREEN CHERT; ULTRA MAFICS	SP		
15.0												15.0 VERY DARK GRAYISH BROWN (2.5Y 3/2) CLAYEY, SILTY VERY FINE TO MEDIUM GRAINED SAND. WELL TO SUB-ROUND, VERY MOIST; MODERATELY SORTED. MINERALOGY: CLEAR AND MILKY QUARTZ; MAFICS, BIOTITE; PYRITE	SC/SM		
25.0												25.0 SAME AS ABOVE WITH A SLIGHT INCREASE IN FINE TO MEDIUM GRAINED SAND			
35.0												35.0 LIGHT YELLOWISH BROWN (2.5Y 6/3) FINE TO MEDIUM GRAINED SAND, WELL ROUNDED TO SUB-ANGULAR; SLIGHTLY MOIST; MODERATELY SORTED MINERALOGY: CLEAR, MILKY AND SMOKEY QUARTZ; BIOTITE; PYRITE; GREEN AND RED CHERT; ULTRA MAFICS			

Signature (logging geologist): P. J. Phillips | Date: 3/9/15

Signature (reviewer): | Date:

Gilbane

Soils Log Form

Boring No.	JW-SB/SG 20

Project: Jervis Webb Project No.: J163007200 Page 1 of 1

Client: U.S. EPA Start Date: 3/18/15 Logged By: P. J. Phillips

Location: South Gate, Ca. Completion Date: 3/18/15 Reviewed By:

Depth	Sampled Interval: Driven	Sampled Interval: Blows /	Sampled Interval: Recovery	OVA (PID / FID)	Grain Size & Distribution (to nearest 5 %): % fines	% sand: f	% sand: m	% sand: c	% gravel: f	% gravel: c	max size	Remarks: Visual/Manual description of soil (ASTM D 2488 / USBR 5005). Description shall provide enough information so that a reviewer can understand the basis of the classification. Include also: Sample IDs; Start/Stop Times; Drilling data, Water levels, Other comments.	Group Symbol	Well Const.: Annulus	Well Const.: Casing
	X											4 INCH THICK CONCRETE FLOOR			
0.5												0.5 DARK BROWN (10 YR 3/3) SILTY VERY FINE TO MEDIUM GRAINED SAND. ROUND TO SUB-ANGULAR; VERY SLIGHTLY MOIST; MODERATELY SORTED. MINERALOGY: CLEAR AND MILKY QUARTZ; POTASSIUM FELDSPAR; BIOTITE; PYRITE	SM		
2.0												2.0 GRAYISH BROWN (10 YR 5/2) MEDIUM GRAINED SAND. SUB-ROUND TO ANGULAR; VERY MOIST; VERY WELL SORTED MINERALOGY; CLEAR, MILKY, FROSTED QUARTZ; POTASSIUM FELDSAR; RED AND GREEN CHERT; BIOTITE; PYRITE	SW		
5.0												5.0 SAME AS ABOVE			
15.0												15.0 VERY DARK GRAYISH BROWN (2.5 Y 3/2) SILTY CLAY / CLAYEY SILT, VERY MOIST; FIRM; LOW PLASTICITY; SLOW DILATANCY	SC		
25.0												25.0 DARK GRAYISH BROWN (2.5 Y 4/2) VERY FINE TO MEDIUM GRAINED SAND. ROUND TO SUB-ANGULAR; VERY SLIGHTLY MOIST; MODERATELY SORTED. MINERALOGY: CLEAR AND MILKY QUARTZ; BIOTITE; PYRITE; ULTRA MAFICS	SM		
35.0												35.0 LIGHT BROWNISH GRAY (2.5 Y 6/2) VERY FINE TO MEDIUM GRAINED SAND. ROUND TO SUB-ANGULAR; SLIGHTLY MOIST; MODERATELY-WELL SORTED. MINERALOGY: CLEAR FROSTED, MILKY, SMOKEY QUARTZ; BIOTITE; PYRITE; RED AND GREEN CHERT; POTASSIUM FELDSPAR	SM/SW		

Signature (logging geologist): _____ Date: 3/18/15

Signature (reviewer): _____ Date: _____

Gilbane

Soils Log Form

Boring No.	JW-SB/SG21

Project: Jervis Webb Project No.: J163007200 Page 1 of 1

Client: U.S. EPA Start Date: 3/17/15 Logged By: P. J. Phillips

Location: South Gate, Ca. Completion Date: 3/17/15 Reviewed By:

Depth	Sampled Interval: Driven	Sampled Interval: Blows /	Sampled Interval: Recovery	OVA (__PID __FID)	Grain Size & Distribution (to nearest 5 %): % fines	% sand: f	% sand: m	% sand: c	% gravel: f	% gravel: c	max size	Remarks: Visual/Manual description of soil (ASTM D 2488 / USBR 5005). Description shall provide enough information so that a reviewer can understand the basis of the classification. Include also: Sample IDs; Start/Stop Times; Drilling data, Water levels, Other comments.	Group Symbol	Well Const.: Annulus	Well Const.: Casing
	X											3 INCH THICK CONCRETE FLOOR			
0.5												0.5 DARK BROWN (10YR 3/3) SILTY, VERY FINE TO MEDIUM GRAINED SAND, ROUND TO SUB-ANGULAR; SLIGHTLY MOIST; MODERATELY SORTED. MINERALOGY; CLEAR, FROSTED AND MILKY QUARTZ, BIOTITE; PYRITE	SM		
2.0												2.0 SAME AS ABOVE WITH INCREASE IN MOISTURE			
5.0												5.0 SAME AS ABOVE WITH GRADATIONAL COLOR CHANGE TO VERY DARK BROWN (10YR 3/1)			
15.0												15.0 VERY DARK BROWN (10YR 3/2) SILTY CLAY / CLAYEY SILT. VERY MOIST TO WET; FIRM; SLOW DILATANCY	SC		
25.0												25.0 DARK GRAYISH BROWN (2.5Y 4/2) SANDY SILT / SILTY SAND, VERY FINE GRAINED; ROUND; MOIST; VERY WELL SORTED. MINERALOGY: CLEAR AND MILKY QUARTZ; BIOTITE, PYRITE, CHERT	SM		
35.0												35.0 LIGHT BROWNISH GRAY (2.5Y 6/2) FINE TO COARSE GRAINED SAND. ROUND TO SUB-ANGULAR; MOIST; POORLY SORTED.	SP		
												MINERALOGY: CLEAR, MILKY, FROSTED SMOKEY QUARTZ; POTASSIUM FELDSPAR, CHERT; BIOTITE; PYRITE			

Signature (logging geologist): [signature] Date: 3/17/15

Signature (reviewer): Date:

Gilbane

Soils Log Form

Boring No.	JW-SB/SG 22

Project: Jervis Webb Project No.: J163007200 Page 1 of 2

Client: U.S. EPA Start Date: 3/18/15 Logged By: P. J. Phillips

Location: South Gate, Ca. Completion Date: 3/18/15 Reviewed By:

Depth	Sampled Interval: Driven	Sampled Interval: Blows / Recovery	OVA: PID / FID	Grain Size & Distribution (to nearest 5 %): % fines	% sand: f	% sand: m	% sand: c	% gravel: f	% gravel: c	max size	Remarks: Visual/Manual description of soil (ASTM D 2488 / USBR 5005). Description shall provide enough information so that a reviewer can understand the basis of the classification. Include also: Sample IDs; Start/Stop Times; Drilling data, Water levels, Other comments.	Group Symbol	Well Const.: Annulus	Well Const.: Casing
	x										3 INCH THICK CONCRETE FLOOR			
0.5											0.5 DARK YELLOWISH BROWN (10YR 4/4) SILTY, VERY FINE TO MEDIUM GRAINED SAND. ROUND TO SUB-ANGULAR; VERY SLIGHTLY MOIST; MODERATELY SORTED. MINERALOGY: CLEAR AND MILKY QUARTZ, CHERT; POTASSIUM FELDSPAR; BIOTITE PYRITE	SM		
2.0											2.0 LIGHT OLIVE BROWN (2.5Y 5/4) MEDIM GRAINED SAND. ROUND TO SUB-ROUND; VERY SLIGHTLY MOIST; VERY WELL SORTED. MINERALOGY: CLEAR, FROSTED AND MILKY QUARTZ; CHERT; POTASSIUM FELDSPAR; BIOTITE; PYRITE	SP		
5.0											5.0 VERY DARK GRAYISH BROWN (2.5Y 3/2) SILTY VERY FINE TO MEDIUM GRAINED SAND. ROUND TO SUB-ANGULAR; VERY MOIST; MODERATELY SORTED. MINERALOGY: CLEAR QUARTZ, BIOTITE; PYRITE; ULTRA MAFICS; CHERT	SM		
15.0											15.0 OLIVE BROWN (2.5Y 4/2) SILTY SAND (SANDY SILT, VERY FINE GRAINED; VERY MOIST; VERY WELL SORTED	SM		
25.0											25.0 DARK GRAYISH BROWN (2.5Y 4/2) SILTY VERY FINE TO MEDIUM GRAINED SAND. ROUND TO SUB-ANGULAR; VERY MOIST; MODERATELY SORTED. MINERALOGY: CLEAR AND MILKY QUARTZ; BIOTITE; PYRITE; ULTRA MAFICS	SP		
35.0											35.0 GRAYISH BROWN (2.5Y 5/2) VERY FINE TO MEDIUM GRAINED SAND. ROUND TO SUB-ANGULAR; VERY SLIGHTLY MOIST; MODERATELY - WELL SORTED. MINERALOGY: CLEAR, SMOKEY;	SW		

Signature (logging geologist): _____ Date: 3/18/15

Signature (reviewer): _____ Date: _____

Gilbane

Soils Log Form

Boring No.	JW-SB/SG 22

Project: Jervis Webb Project No.: J163007200 Page 2 of 2

Client: U.S. EPA Start Date: 3/18/15 Logged By: P. J. Phillips

Location: South Gate, Ca. Completion Date: 3/18/15 Reviewed By:

Depth	Sampled Interval: Driven	Sampled Interval: Blows /	Sampled Interval: Recovery	OVA (__PID __FID)	Grain Size & Distribution (to nearest 5 %): % fines	% sand: f	% sand: m	% sand: c	% gravel: f	% gravel: c	max size	Remarks: Visual/Manual description of soil (ASTM D 2488 / USBR 5005). Description shall provide enough information so that a reviewer can understand the basis of the classification. Include also: Sample IDs; Start/Stop Times; Drilling data, Water levels, Other comments.	Group Symbol	Well Const.: Annulus	Well Const.: Casing
	x											FROSTED QUARTZ; POTASSIUM FELDSPAR; RED AND GREEN CHERT; BIOTITE; PYRITE			

Signature (logging geologist): [signature] Date: 3/18/15

Signature (reviewer): Date:

Gilbane

Soils Log Form

Boring No.	JW-SB/SG 23

Project: Jervis Webb Project No.: J163007200 Page 1 of 1

Client: U.S. EPA Start Date: 3/19/15 Logged By: P. J. Phillips

Location: South Gate, Ca. Completion Date: 3/19/15 Reviewed By:

Depth	Sampled Interval: Driven	Sampled Interval: Blows /	Sampled Interval: Recovery	OVA (__PID __FID)	Grain Size & Distribution (to nearest 5 %): % fines	% sand: f	% sand: m	% sand: c	% gravel: f	% gravel: c	max size	Remarks: Visual/Manual description of soil (ASTM D 2488 / USBR 5005). Description shall provide enough information so that a reviewer can understand the basis of the classification. Include also: Sample IDs; Start/Stop Times; Drilling data, Water levels, Other comments.	Group Symbol	Well Const.: Annulus	Well Const.: Casing
	x											4 INCH THICK CONCRETE FLOOR			
0.5												0.5 DARK GRAYISH BROWN (2.5Y 3/2) VERY FINE TO MEDIUM GRAINED SAND. SUB-ROUND TO SUB-ANGULAR; MOIST; MODERATELY-WELL SORTED. MINERALOGY: CLEAR AND MILKY QUARTZ; BIOTITE; CHERT; BIOTITE; POTASSIUM FELDSPAR	SW		
2.0												2.0 SAME AS ABOVE			
5.0												5.0 VERY DARK GRAYISH BROWN (10YR 3/2) SILTY VERY FINE TO COARSE GRAINED SAND. ROUND TO SUB-ANGULAR; VERY MOIST; MODERATELY-WELL SORTED. MINERALOGY: CHERT; QUARTZ; BIOTITE; PYRITE	SM		
15.0												15.0 DARK GRAYISH BROWN (2.5Y 3/1) SILTY VERY FINE TO FINE GRAINED SAND. ROUND; VERY MOIST; VERY WELL SORTED. MINERALOGY; QUARTZ; CHERT; BIOTITE; POTASSIUM FELDSPAR; PYRITE	SW		
25.0												25.0 VERY DARK GRAY (2.5Y 3/1) SILTY SAND/ SANDY SILT. ROUND; VERY MOIST; MODERATELY-WELL SORTED. MINERALOGY: QUARTZ; BIOTITE; PYRITE; UTRA MAFICS	SM		
35.0												35.0 GRAYISH BROWN (2.5Y 5/2) FINE TO MEDIUM GRAINED SAND, ROUND TO SUB-ANGULAR; SLIGHTLY MOIST; MODERATEE-WELL SORTED. MINERALOGY: CLEAR, SMOKEY AND MILKY QUARTZ; CHERT; POTASSIUM FELDSPAR; BIOTITE; PYRITE	SM		

Signature (logging geologist): [signature] Date: 3/R/15

Signature (reviewer): Date:

Gilbane

Soils Log Form

Boring No.	JW-SB/SG Z4

Project: Jervis Webb Project No.: J163007200 Page 1 of 1

Client: U.S. EPA Start Date: 3/17/15 Logged By: P. J. Phillips

Location: South Gate, Ca. Completion Date: 3/17/15 Reviewed By:

Depth	Sampled Interval: Driven	Sampled Interval: Blows /	Sampled Interval: Recovery	OVA (__PID __FID)	Grain Size & Distribution (to nearest 5 %): % fines	% sand: f	% sand: m	% sand: c	% gravel: f	% gravel: c	max size	Remarks: Visual/Manual description of soil (ASTM D 2488 / USBR 5005). Description shall provide enough information so that a reviewer can understand the basis of the classification. Include also: Sample IDs; Start/Stop Times; Drilling data, Water levels, Other comments.	Group Symbol	Well Const.: Annulus	Well Const.: Casing
	x											4 INCH THICK CONCRETE FLOOR			
0.5												0.5 DARK BROWN (10YR 3/2) SILTY, VERY FINE TO MEDIUM SAND. ROUND TO SUB-ANGULAR; SLIGHTLY MOIST; MODERATELY-WELL SORTED. MINERALOGY: CLEAR AND MILKY QUARTZ; BIOTITE; PYRITE	SM		
2.0												2.0 SAME AS ABOVE			
5.0												5.0 SAME AS ABOVE WITH INCREASE IN MOISTURE			
15.0												15.0 GRAYISH BROWN (2.5Y 5/2) SILTY SAND/ SANDY SILT. VERY MOIST TO WET	SM		
25.0												25.0 DARK GRAYISH BROWN (2.5Y 4/2) VERY FINE TO MEDIUM GRAINED SAND. SUB-ROUND TO SUB-ANGULAR; MODERATELY SORTED. MINERALOGY: CLEAR, FROSTED AND MILKY QUARTZ; BIOTITE; PYRITE	SW		
35.0												35.0 LIGHT BROWNISH GRAY (2.5Y 6/2) FINE TO MEDIUM GRAINED SAND. WELL ROUNDED TO SUB-ANGULAR; SLIGHTLY MOIST; MODERATELY-WELL SORTED. MINERALOGY: CLEAR, FROSTED, MILKY AND SMOKEY QUARTZ; POTASSIUM FELDSPAR; GREEN AND RED CHERT; BIOTITE; PYRITE	SW		

Signature (logging geologist): [signature] Date: 3/17/15

Signature (reviewer): Date:

Gilbane

Soils Log Form

Boring No.	JW-SB/SG 25

Project: Jervis Webb Project No.: J163007200 Page 1 of 1

Client: U.S. EPA Start Date: 3/16/15 Logged By: P. J. Phillips

Location: South Gate, Ca. Completion Date: 3/16/15 Reviewed By:

Depth	Sampled Interval: Driven	Sampled Interval: Blows /	Sampled Interval: Recovery	OVA (__PID __FID)	Grain Size & Distribution (to nearest 5 %): % fines	% sand: f	% sand: m	% sand: c	% gravel: f	% gravel: c	max size	Remarks: Visual/Manual description of soil (ASTM D 2488 / USBR 5005). Description shall provide enough information so that a reviewer can understand the basis of the classification. Include also: Sample IDs; Start/Stop Times; Drilling data, Water levels, Other comments.	Group Symbol	Well Const.: Annulus	Well Const.: Casing
	X											4 INCH THICK CONCRETE FLOOR			
0.5												0.5 DARK BROWN (10YR 3/3) SILTY VERY FINE TO MEDIUM GRAINED SAND. ROUND TO SUB-ANGULAR; MOIST; MODERATELY-WELL SORTED. MINERALOGY: CLEAR AND MILKY QUARTZ; BIOTITE; PYRITE; ULTR MAFICS	SW		
2.0												2.0 SAME AS ABOVE			
5.0												5.0 SAME AS ABOVE WITH GRADATIONAL COLOR CHANGE TO VERY DARK GRAYISH BROWN (10YR 3/2) AND AN INCREASE IN MOISTURE			
15.0												15.0 GRAYISH BROWN (2.5Y 5/2) SILTY VERY FINE TO FINEGRAINED SAND. ROUND TO SUB-ANGULAR; SLIGHTLY MOIST; MODERATED-WELL SORTED. MINERALOGY: CLEAR AND MILKY QUARTZ; POTASSIUM FELDSPAR; CHERT; PYRITE; BIOTITE	SM		
25.0												25.0 SAME AS ABOVE WITH GRADATIONAL COLOR CHANGE TO DARK GRAYISH BROWN (2.5Y 4/2) AND INCREASE IN MOISTURE			
35.0												35.0 LIGHT BROWNISH GRAY (2.5Y 6/2) MEDIUM GRAINED SAND. ROUND TO SUB-ANGULAR, VERY SLIGHTLY MOIST; VERY WELL SORTED. MINERALOGY: CLEAR, MILKY, FROSTED AND SMOKEY QUARTZ; POTASSIUM FELDSPAR; RED AND GREEN CHERT, BIOTITE; PYRITE; ULTRA MAFICS	SW		

Signature (logging geologist): _____ Date: 3/16/15

Signature (reviewer): _____ Date: _____

Gilbane

Soils Log Form

Boring No.	JW-SB/SG 26

Project: Jervis Webb Project No.: J163007200 Page 1 of 1

Client: U.S. EPA Start Date: 3/16/15 Logged By: P. J. Phillips

Location: South Gate, Ca. Completion Date: 3/16/15 Reviewed By:

Depth	Sampled Interval: Driven	Sampled Interval: Blows /	Sampled Interval: Recovery	OVA: __ PID __ FID	Grain Size & Distribution (to nearest 5 %): % fines	% sand: f	% sand: m	% sand: c	% gravel: f	% gravel: c	max size	Remarks: Visual/Manual description of soil (ASTM D 2488 / USBR 5005). Description shall provide enough information so that a reviewer can understand the basis of the classification. Include also: Sample IDs; Start/Stop Times; Drilling data, Water levels, Other comments.	Group Symbol	Well Const.: Annulus	Well Const.: Casing
	x											4 INCH THICK CONCRETE FLOOR			
0.5												0.5 DARK GRAYISH BROWN (10YR 4/2) VERY FINE TO COARSE GRAINED SAND, ANGULAR TO ROUND; MOIST; POORLY SORTED. MINERALOGY: CLEAR AND MILKY QUARTZ; PYRITE; BIOTITE; CHERT; ULTRA MAFICS	SW		
2.0												2.0 SAME AS ABOVE			
5.0												5.0 VERY DARK GRAYISH BROWN (10YR 3/2) SILTY VERY FINE TO MEDIUM GRAINED SAND. ROUND TO SUB-ANGULAR, MOIST; MODERATELY SORTED. MINERALOGY: CLEAR, MILKY, FROSTED, AND SMOKEY QUARTZ; BIOTITE; CHERT, POTASSIUM FELDSPAR	SM		
15.0												15.0 GRAYISH BROWN (2.5Y 5/2) SILTY VERY FINE TO FINE GRAINED SAND. ROUND TO SUB-ROUND; VERY SLIGHTLY MOIST; MODERATELY-WELL SORTED. MINERALOGY: CLEAR AND MILKY QUARTZ CHERT; POTASSIUM FELDSPAR; BIOTITE; PYRITE	SM		
25.0												25.0 SAME AS ABOVE WITH GRADATIONAL COLOR CHANGE TO DARK GRAYISH BROWN (2.5Y 4/2) AND INCREASE IN MOISTURE			
35.0												35.0 LIGHT BROWNISH GRAY (2.5Y 6/2) MEDIUM GRAINED SAND. ROUND TO SUB-ANGULAR; VERY SLIGHTLY MOIST; VERY WELL SORTED. MINERALOGY; CLEAR, MILKY, FROSTED AND SMOKEY QUARTZ; POTASSIUM FELDSPAR; RED AND GREEN CHERT, BIOTITE; PYRITE; ULTRA MAFICS	SW		

Signature (logging geologist): [signature] Date: 3/16/15

Signature (reviewer): Date:

Gilbane

Soils Log Form

Boring No.	JW-SB/SG27

Project: Jervis Webb Project No.: J163007200 Page 1 of 1

Client: U.S. EPA Start Date: 3/10/15 Logged By: P. J. Phillips

Location: South Gate, Ca. Completion Date: 3/10/15 Reviewed By:

Depth	Sampled Interval: Driven	Sampled Interval: Blows /	Sampled Interval: Recovery	OVA: __ PID __ FID	Grain Size & Distribution (to nearest 5 %): % fines	% sand: f	% sand: m	% sand: c	% gravel: f	% gravel: c	max size	Remarks: Visual/Manual description of soil (ASTM D 2488 / USBR 5005). Description shall provide enough information so that a reviewer can understand the basis of the classification. Include also: Sample IDs; Start/Stop Times; Drilling data, Water levels, Other comments.	Group Symbol	Well Const.: Annulus	Well Const.: Casing
	X														
0.5												0.5 DARK GRAYISH BROWN (10YR 4/2) SILTY FINE TO MEDIUM GRAINED SAND, WELL ROUNDED TO SUB-ANGULAR; VERY MOIST; MODERATELY WELL SORTED. MINERALOGY: CLEAR, FROSTED, MILKY QUARTZ, BIOTITE; PYRITE; CHERT	SM		
2.0												2.0 SAME AS ABOVE			
5.0												5.0 SAME AS ABOVE WITH INCREASE IN SILTY SAND AND MOISTURE			
15.0												15.0 SAME AS ABOVE WITH CONTINUED INCREASE IN MOISTURE			
20.0												20.0 DARK OLIVE BROWN (2.5Y 3/3) SILTY SAND/SANDY SILT, VERY FINE GRAINED; WELL ROUNDED; MOIST; VERY WELL SORTED	SM		
30.0												30.0 DARK OLIVE BROWN (2.5Y 3/3) SILTY CLAY/ CLAYEY SILT, FIRM; MOIST; LOW PLASTISITY	SC/SM		

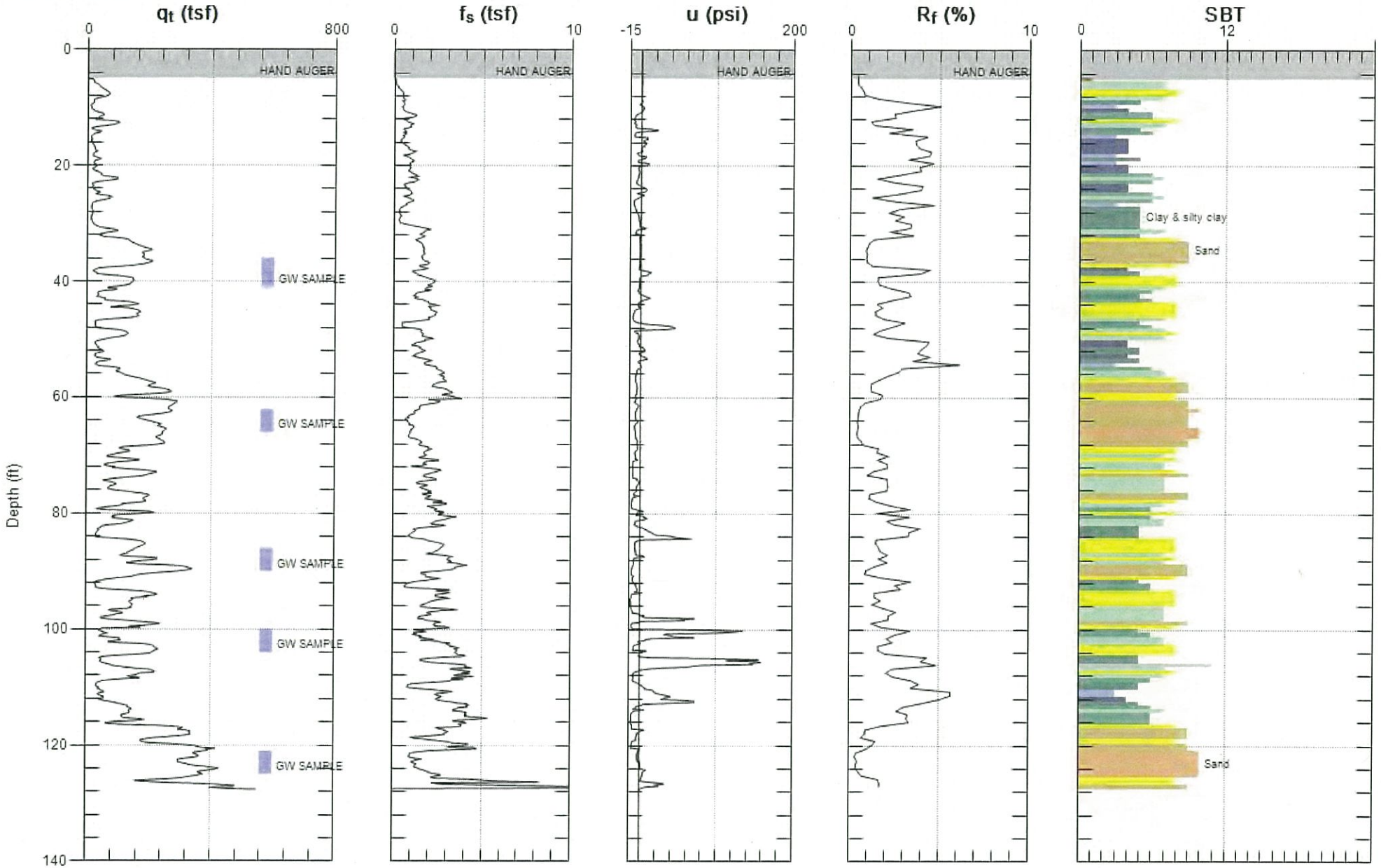
Signature (logging geologist): [signature] Date: 3/10/15

Signature (reviewer): Date:

GREGG **ITSI**

Site: SOUTHERN AVE. Engineer: D.GRUBER

Sounding: JW-CPT-1 Date: 3/27/2013 08:08



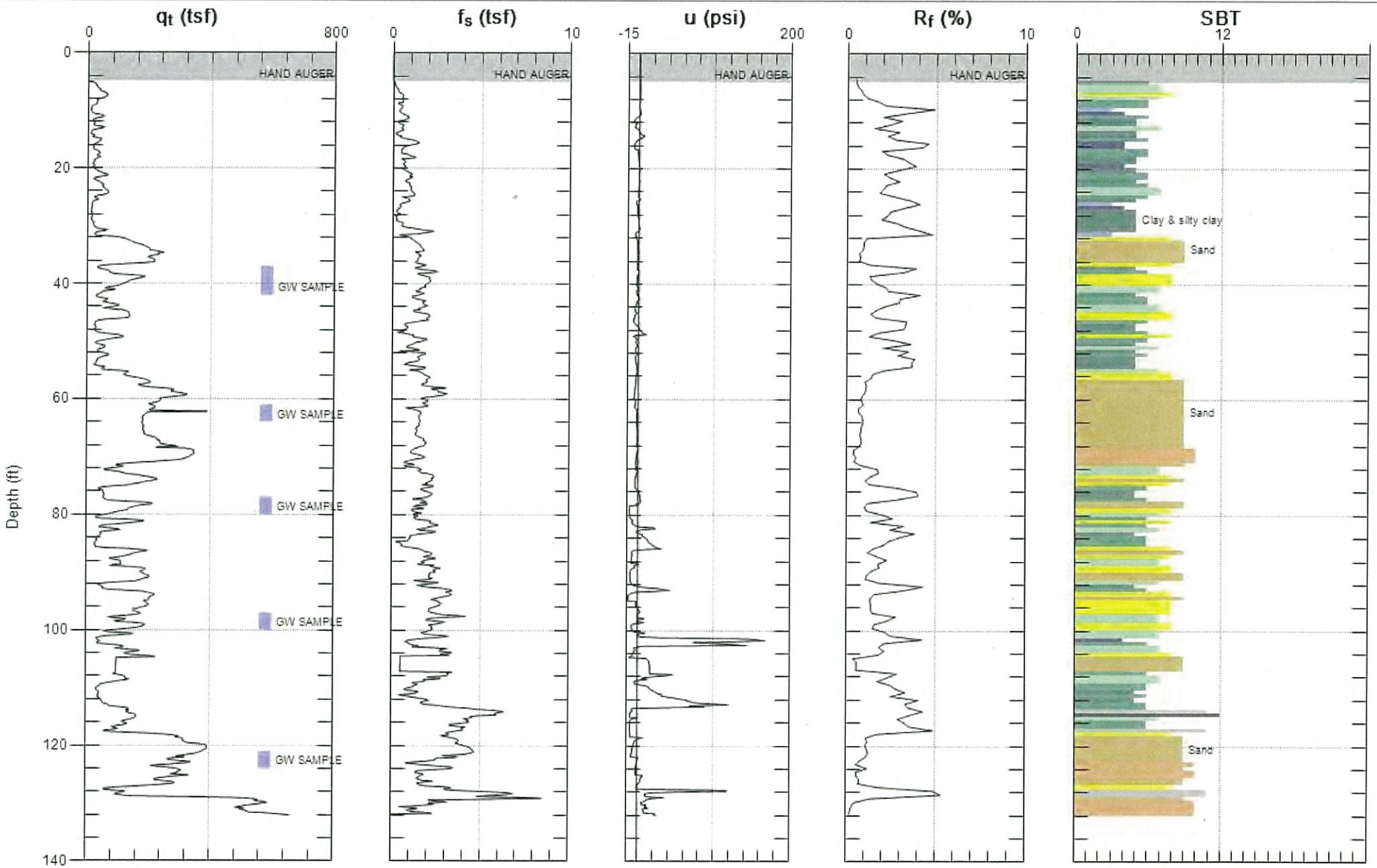
Max. Depth: 127.625 (ft)
Avg. Interval: 0.656 (ft)

SBT: Soil Behavior Type (Robertson 1990)

GREGG ITSI

Site: SOUTHERN AVE. Engineer: D.GRUBER

Sounding: JW-CPT-2 Date: 3/26/2013 07:33



Max. Depth: 132.054 (ft)

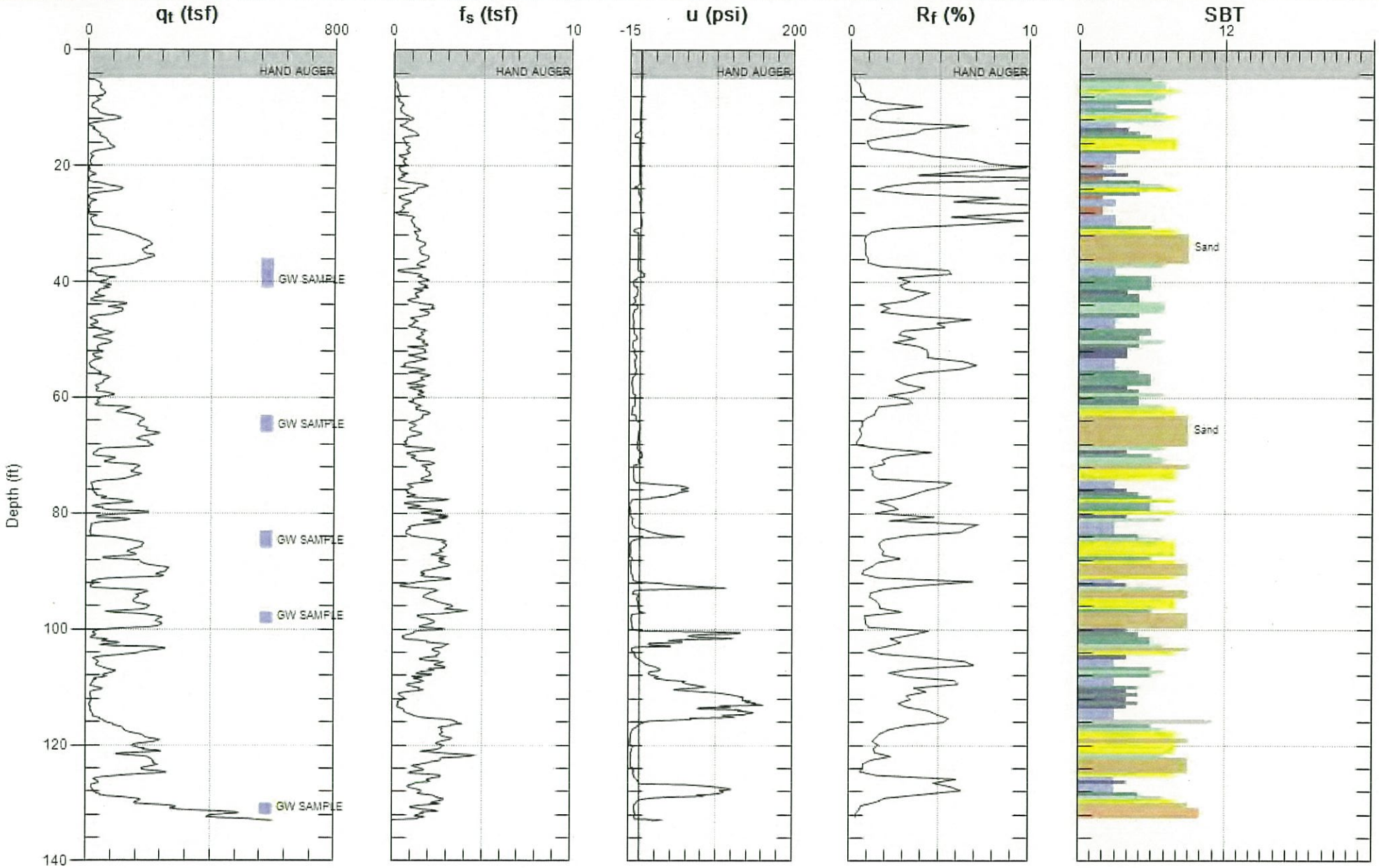
Avg. Interval: 0.656 (ft)

SBT: Soil Behavior Type (Robertson 1990)

GREGG **ITSI**

Site: SOUTHERN AVE. Engineer: D.GRUBER

Sounding: JW-CPT-3 Date: 3/25/2013 07:42



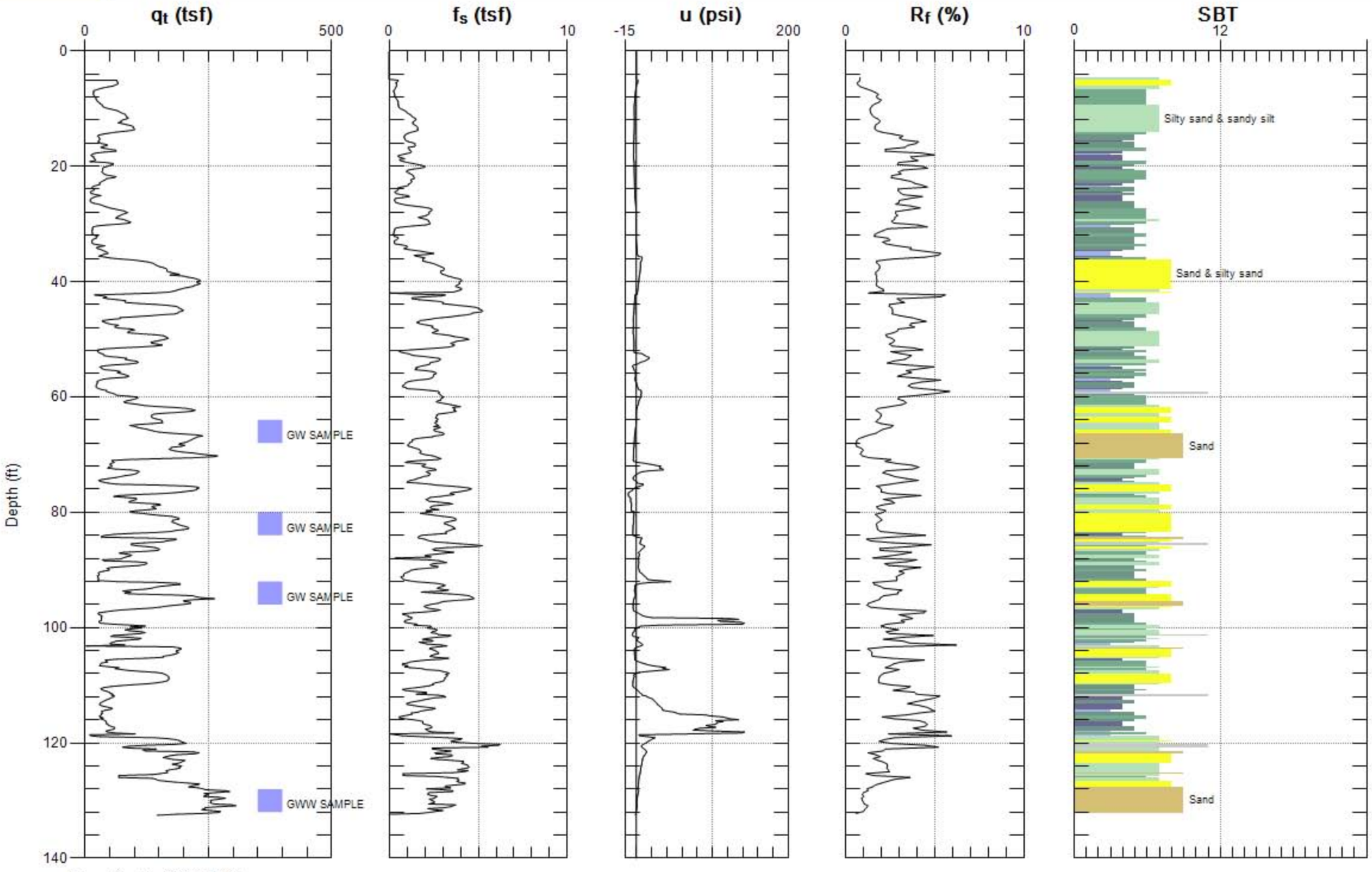
Max. Depth: 133.038 (ft)
Avg. Interval: 0.656 (ft)

SBT: Soil Behavior Type (Robertson 1990)

GILBANE

Site: JERVIS WEBB
Sounding: CPT-4

Engineer: P. PHILLIPS
Date: 6/15/2015 08:37



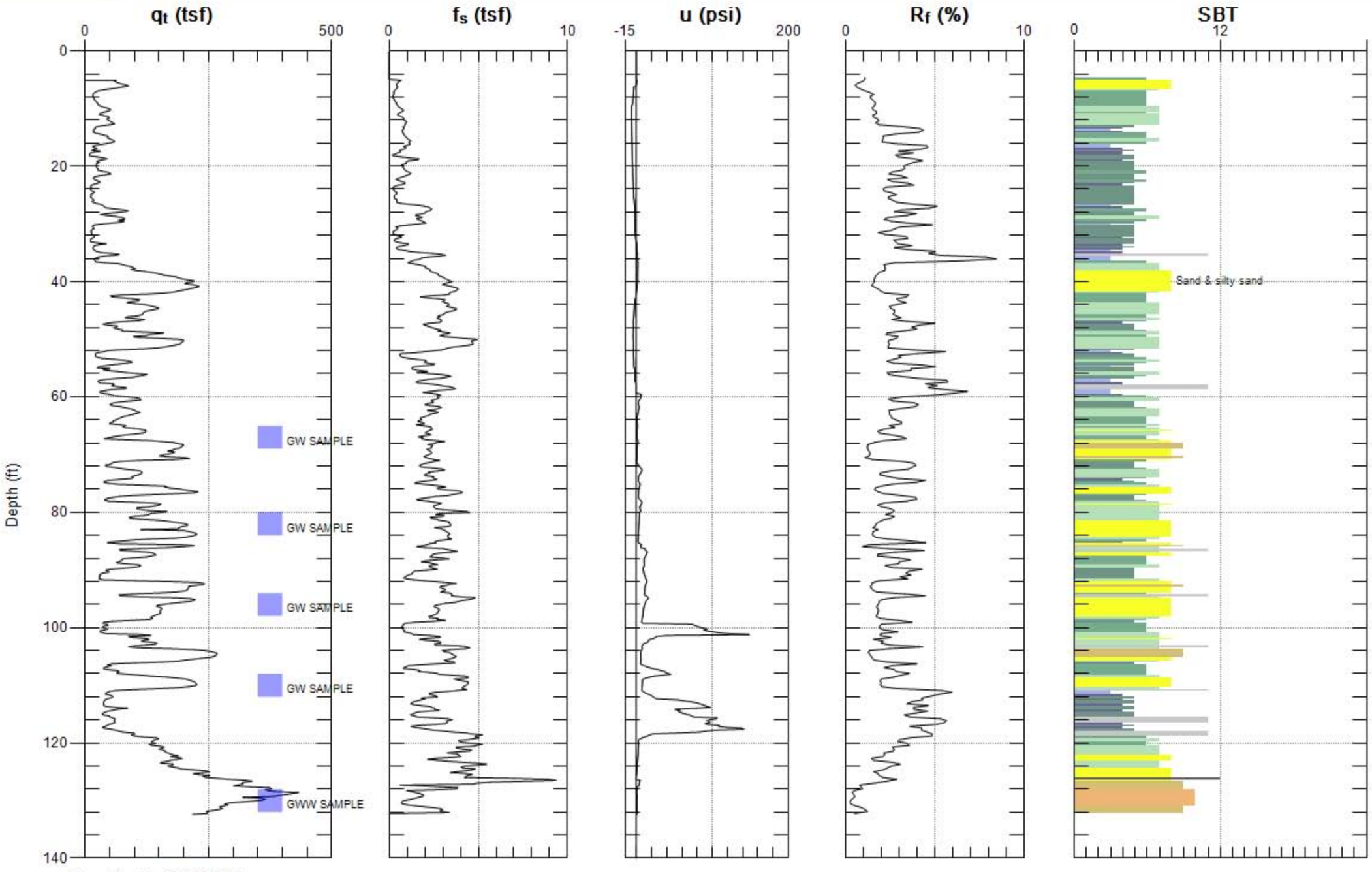
Max. Depth: 132.546 (ft)
Avg. Interval: 0.328 (ft)

SBT: Soil Behavior Type (Robertson 1990)

GILBANE

Site: JERVIS WEBB
Sounding: CPT-5

Engineer: P. PHILLIPS
Date: 6/16/2015 08:10



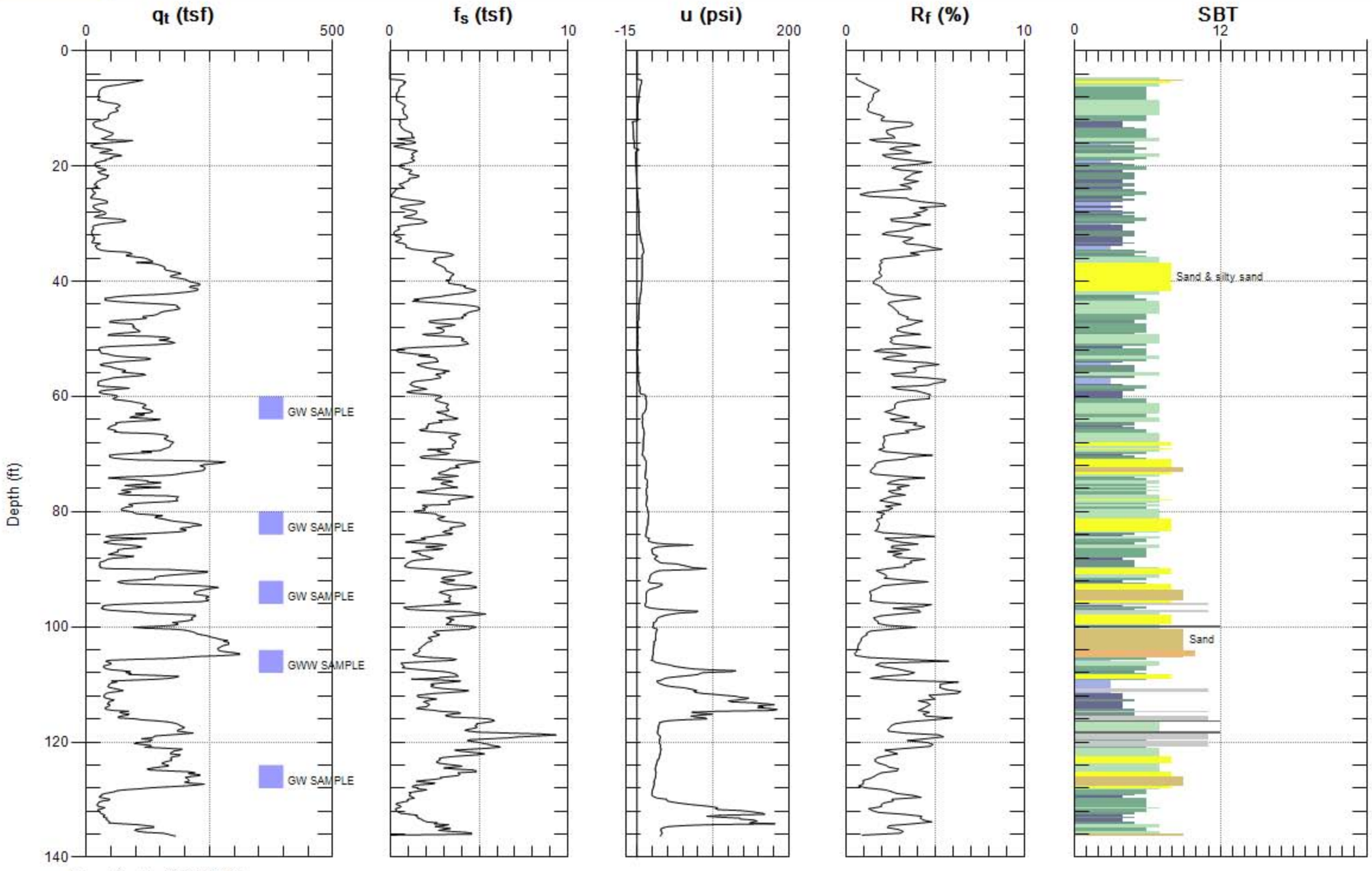
Max. Depth: 132.382 (ft)
Avg. Interval: 0.328 (ft)

SBT: Soil Behavior Type (Robertson 1990)

GILBANE

Site: JERVIS WEBB
Sounding: CPT-6

Engineer: P. PHILLIPS
Date: 6/18/2015 06:10



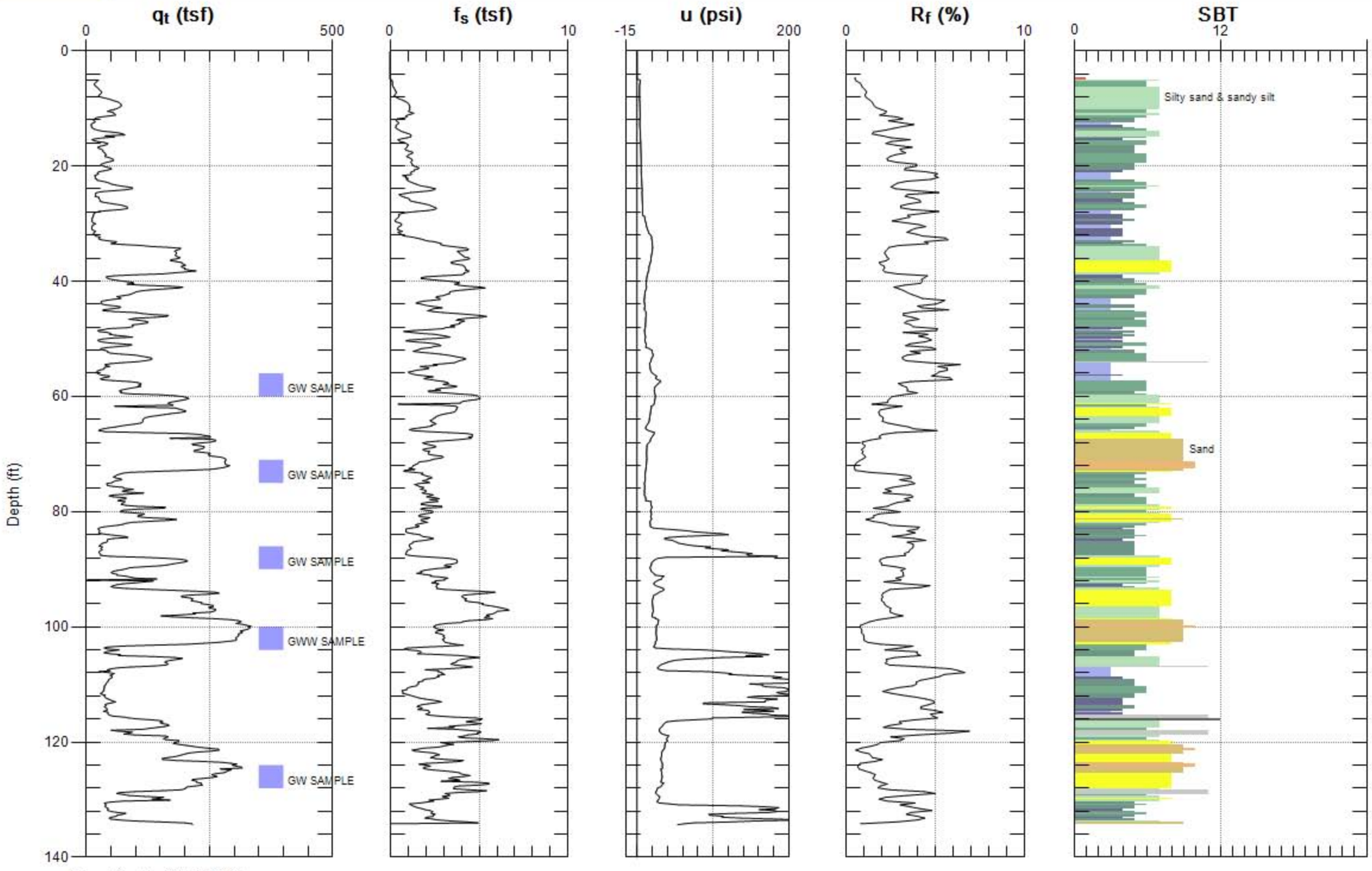
Max. Depth: 136.319 (ft)
Avg. Interval: 0.328 (ft)

SBT: Soil Behavior Type (Robertson 1990)

GILBANE

Site: JERVIS WEBB
Sounding: CPT-7

Engineer: P. PHILLIPS
Date: 6/18/2015 07:11



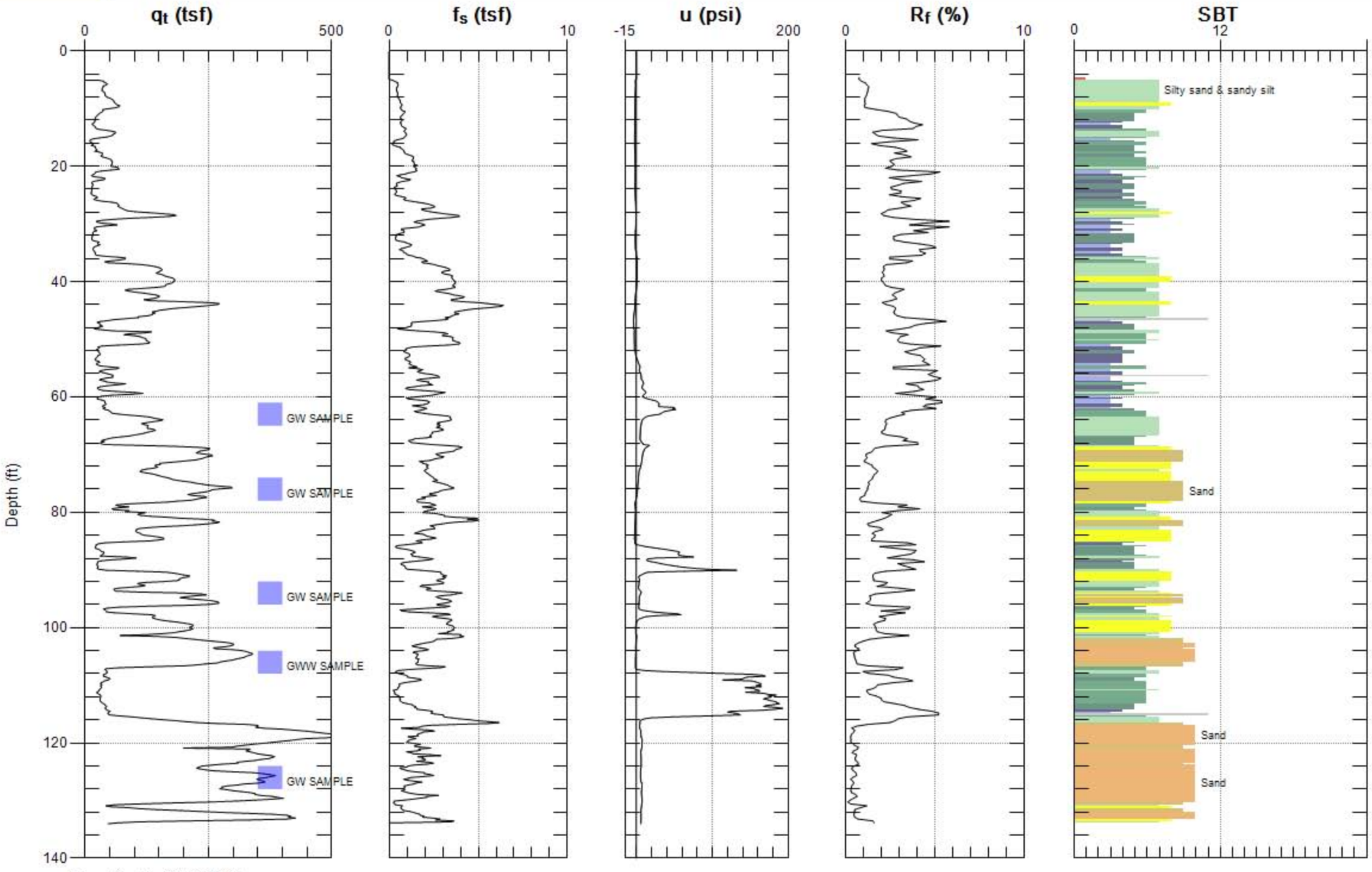
Max. Depth: 134.350 (ft)
Avg. Interval: 0.328 (ft)

SBT: Soil Behavior Type (Robertson 1990)

GILBANE

Site: JERVIS WEBB
Sounding: CPT-8

Engineer: P. PHILLIPS
Date: 6/17/2015 07:32



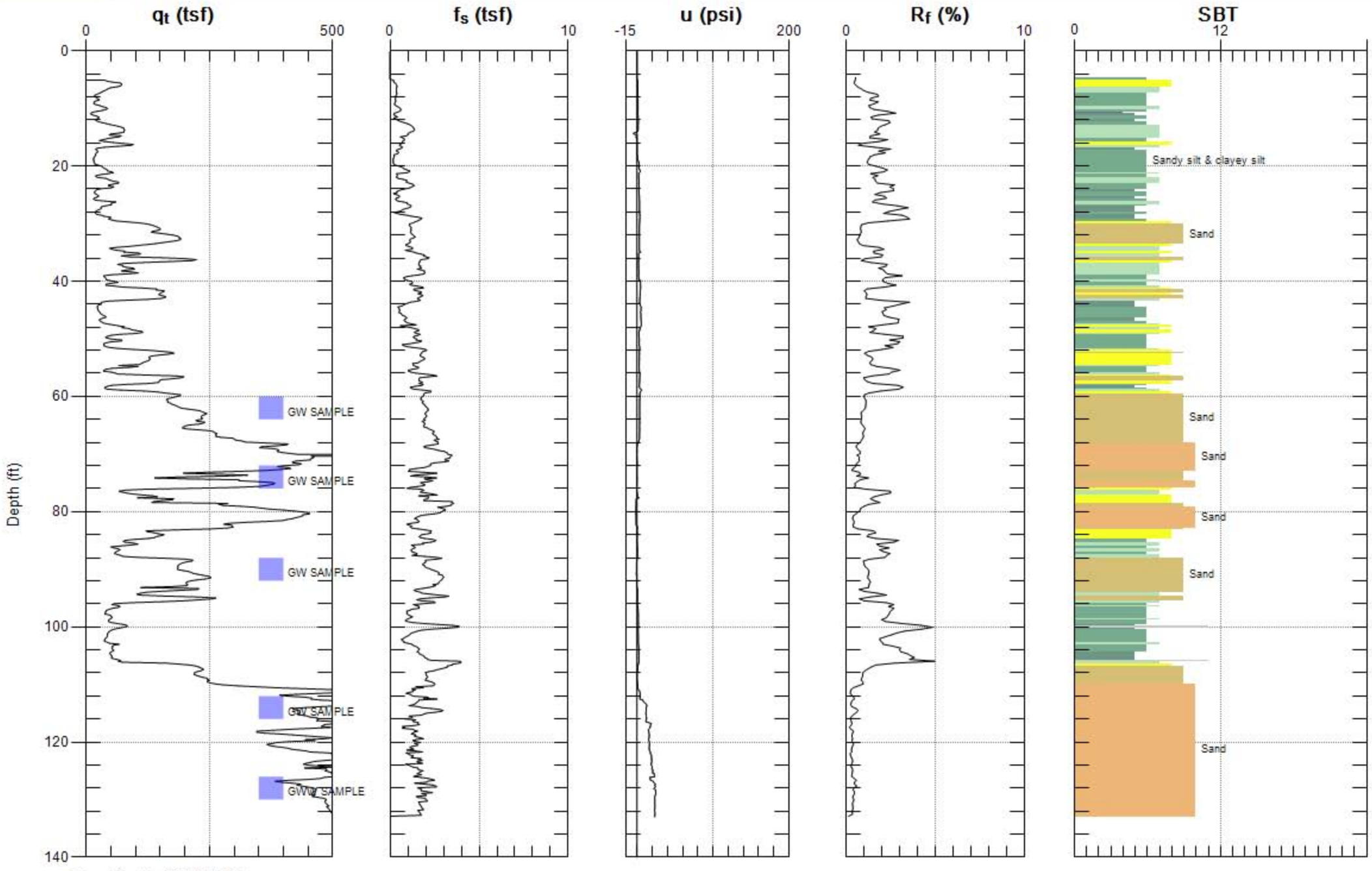
Max. Depth: 134.022 (ft)
Avg. Interval: 0.328 (ft)

SBT: Soil Behavior Type (Robertson 1990)

GILBANE

Site: JERVIS WEBB
Sounding: CPT-9

Engineer: P. PHILLIPS
Date: 6/23/2015 07:11



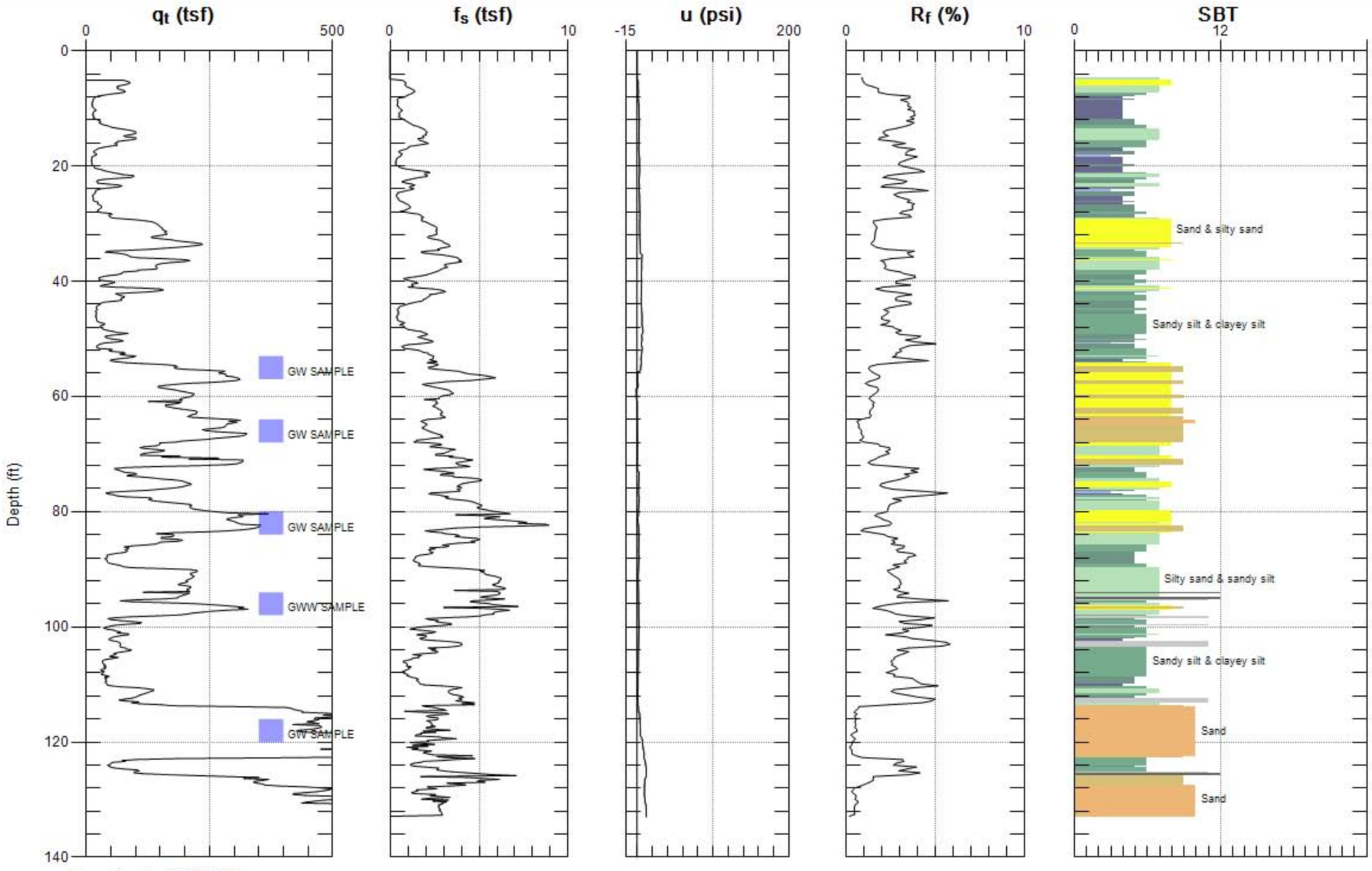
Max. Depth: 133.038 (ft)
Avg. Interval: 0.328 (ft)

SBT: Soil Behavior Type (Robertson 1990)

GILBANE

Site: JERVIS WEBB
Sounding: CPT-10

Engineer: P. PHILLIPS
Date: 6/22/2015 07:05



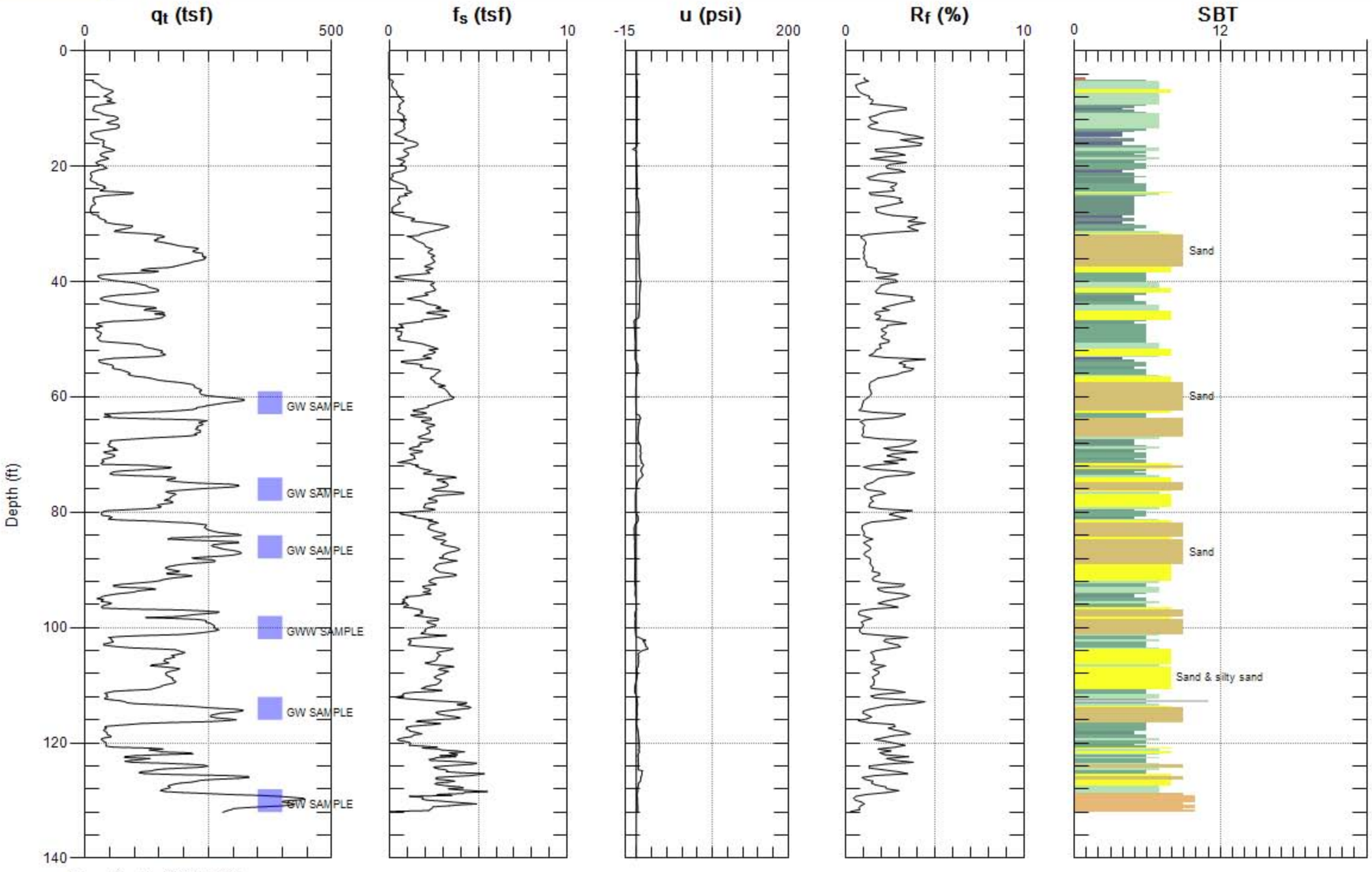
Max. Depth: 133.038 (ft)
Avg. Interval: 0.328 (ft)

SBT: Soil Behavior Type (Robertson 1990)

GILBANE

Site: JERVIS WEBB
Sounding: CPT-11

Engineer: P. PHILLIPS
Date: 6/29/2015 07:35



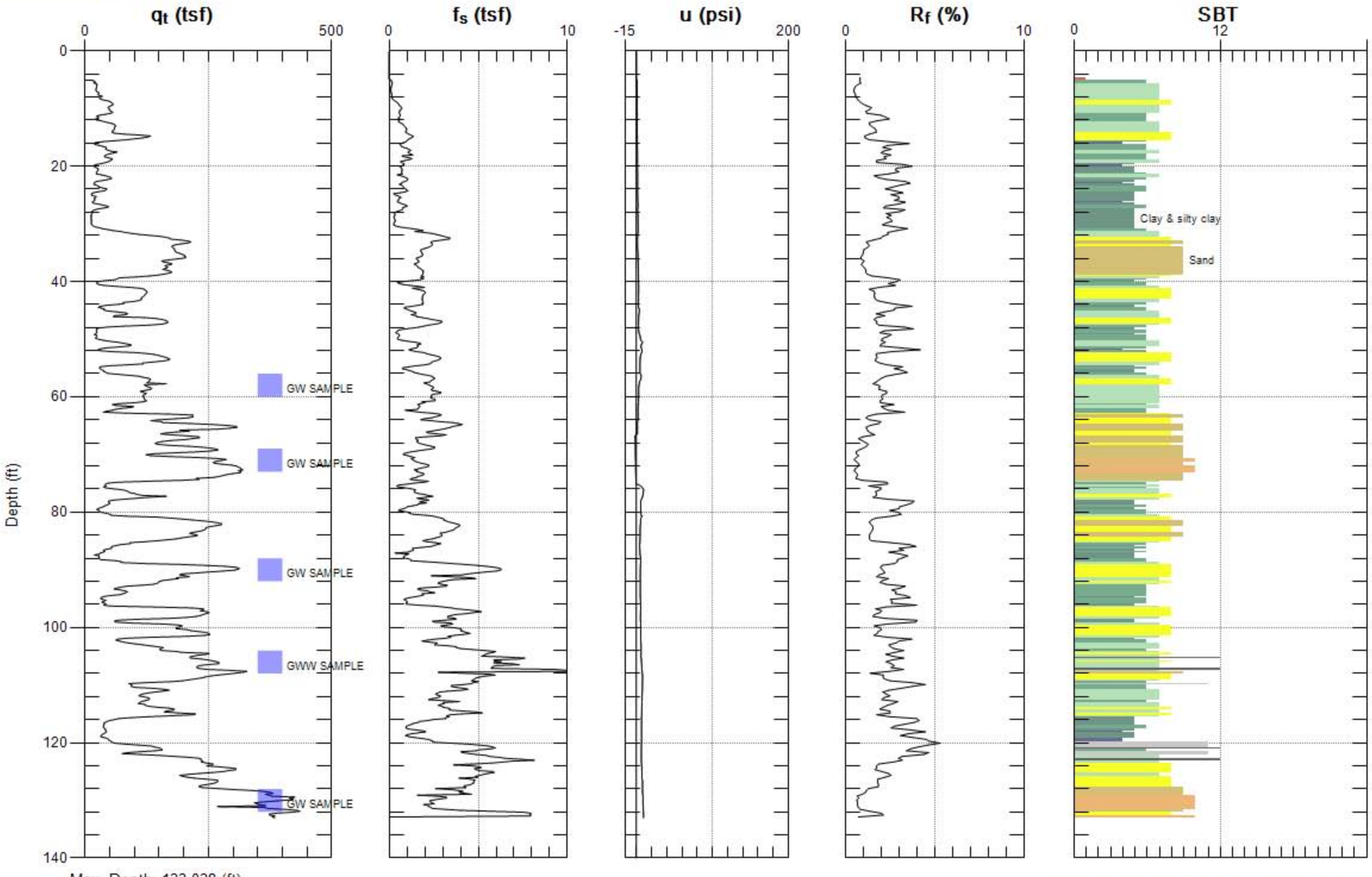
Max. Depth: 132.054 (ft)
Avg. Interval: 0.328 (ft)

SBT: Soil Behavior Type (Robertson 1990)

GILBANE

Site: JERVIS WEBB
Sounding: CPT-12

Engineer: P. PHILLIPS
Date: 6/26/2015 07:06



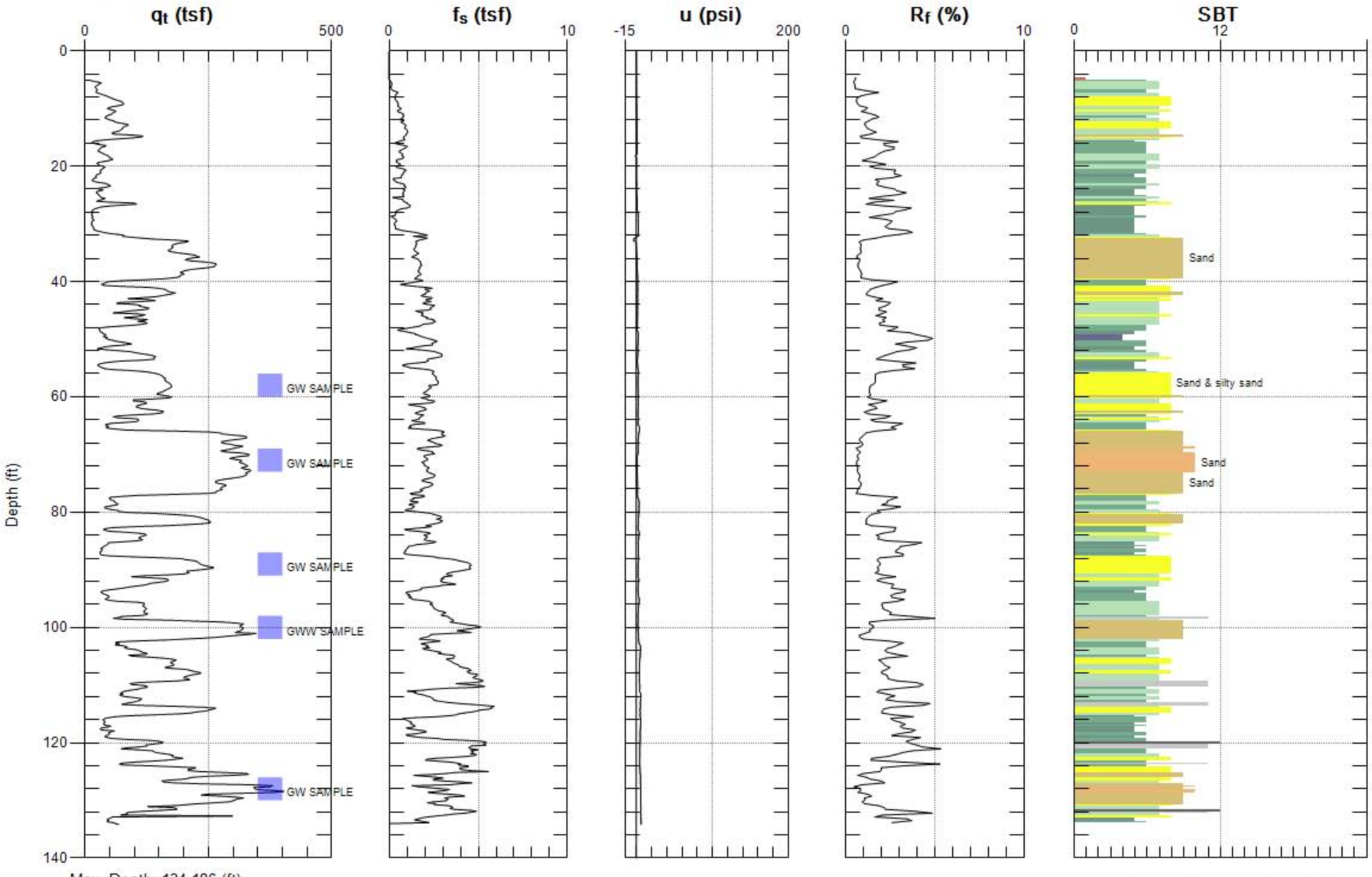
Max. Depth: 133.038 (ft)
Avg. Interval: 0.328 (ft)

SBT: Soil Behavior Type (Robertson 1990)

GILBANE

Site: JERVIS WEBB
Sounding: CPT-13

Engineer: P. PHILLIPS
Date: 6/25/2015 07:23



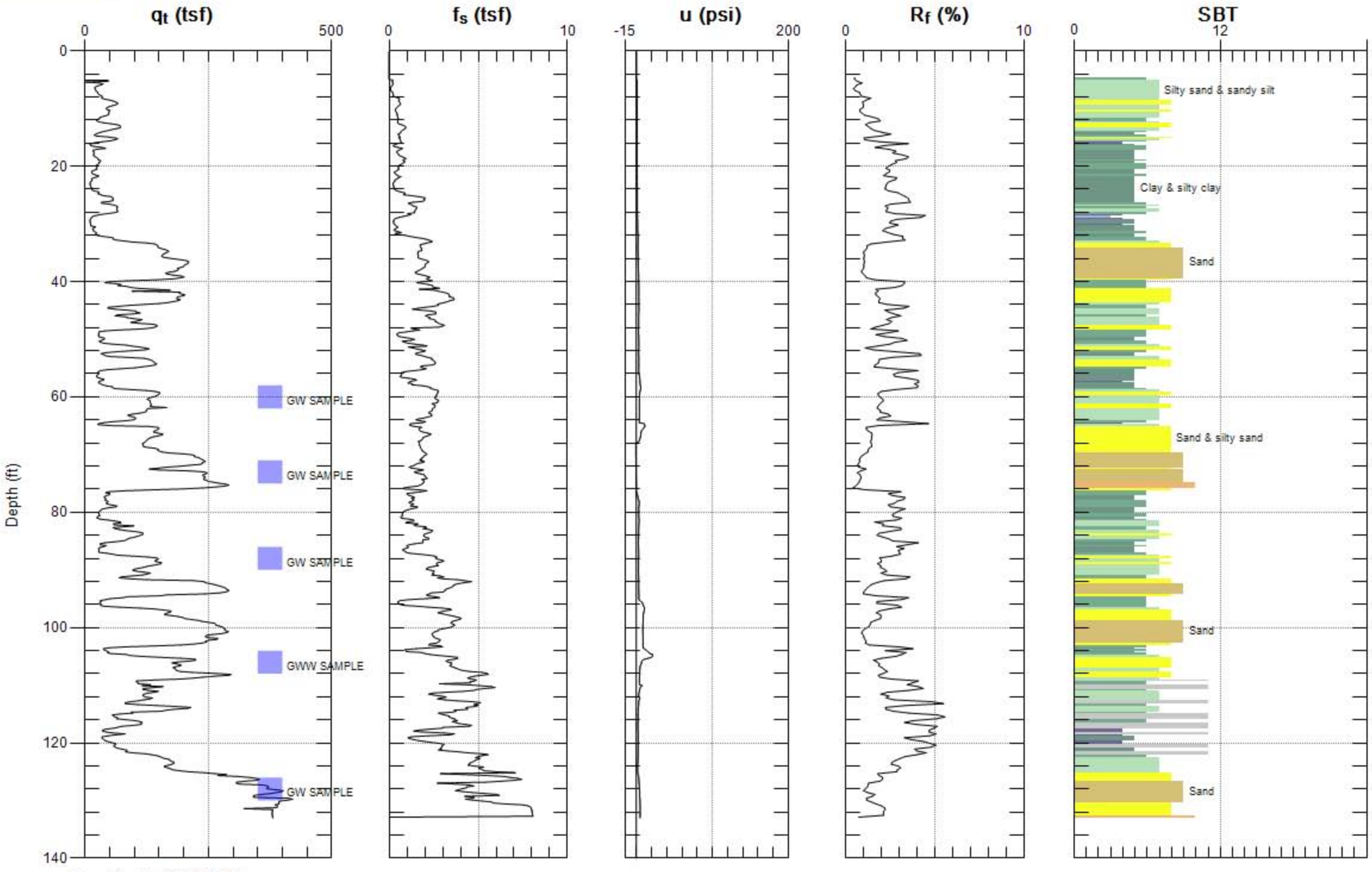
Max. Depth: 134.186 (ft)
Avg. Interval: 0.328 (ft)

SBT: Soil Behavior Type (Robertson 1990)

GILBANE

Site: JERVIS WEBB
Sounding: CPT-14

Engineer: P. PHILLIPS
Date: 6/24/2015 07:24

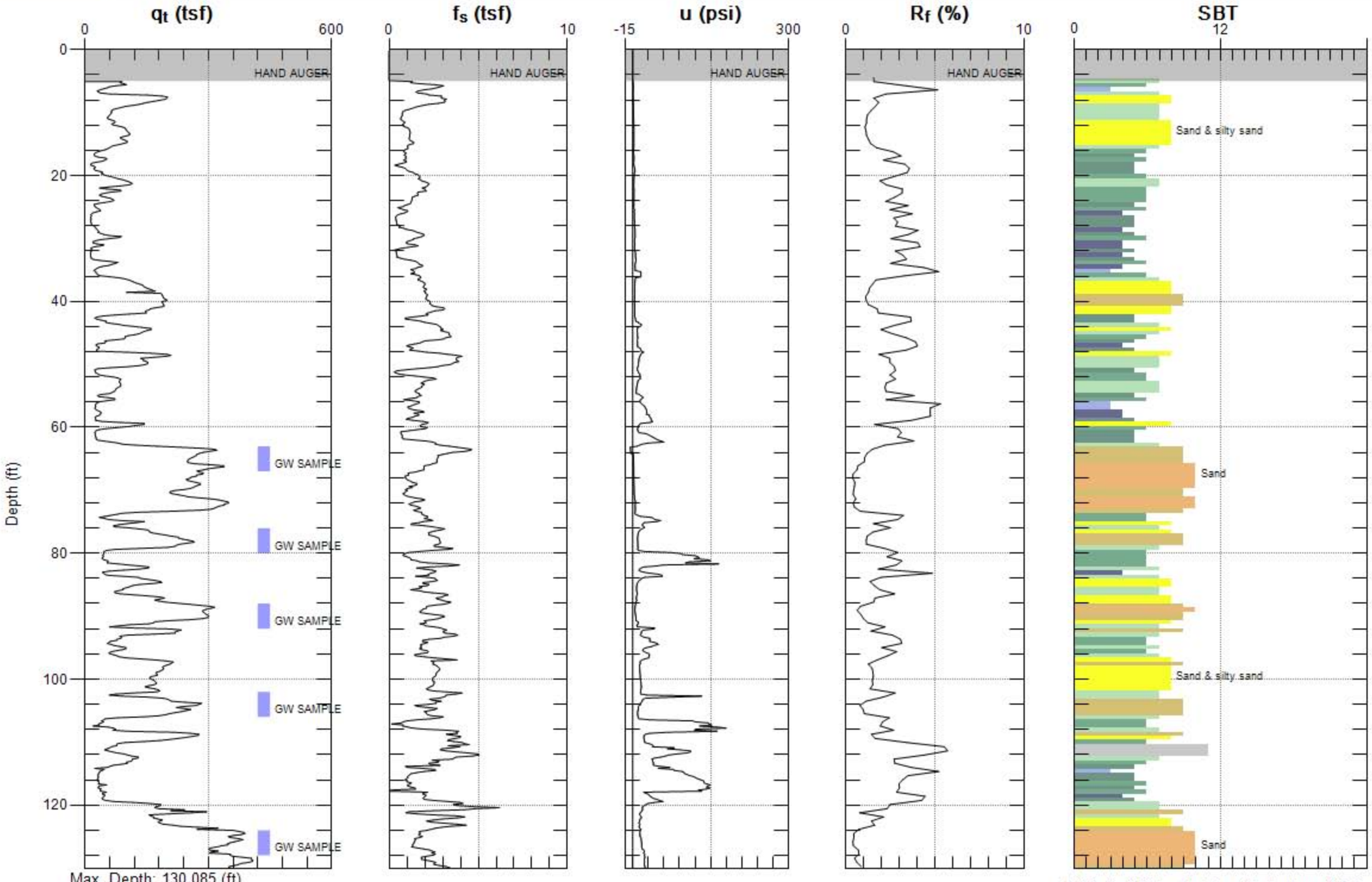


Max. Depth: 133.038 (ft)
Avg. Interval: 0.328 (ft)

SBT: Soil Behavior Type (Robertson 1990)

GILBANE FEDERAL

Site: JERVIS B. WEBB
Sounding: CPT-15
Engineer: P.PHILLIPS
Date: 10/26/2015 09:01

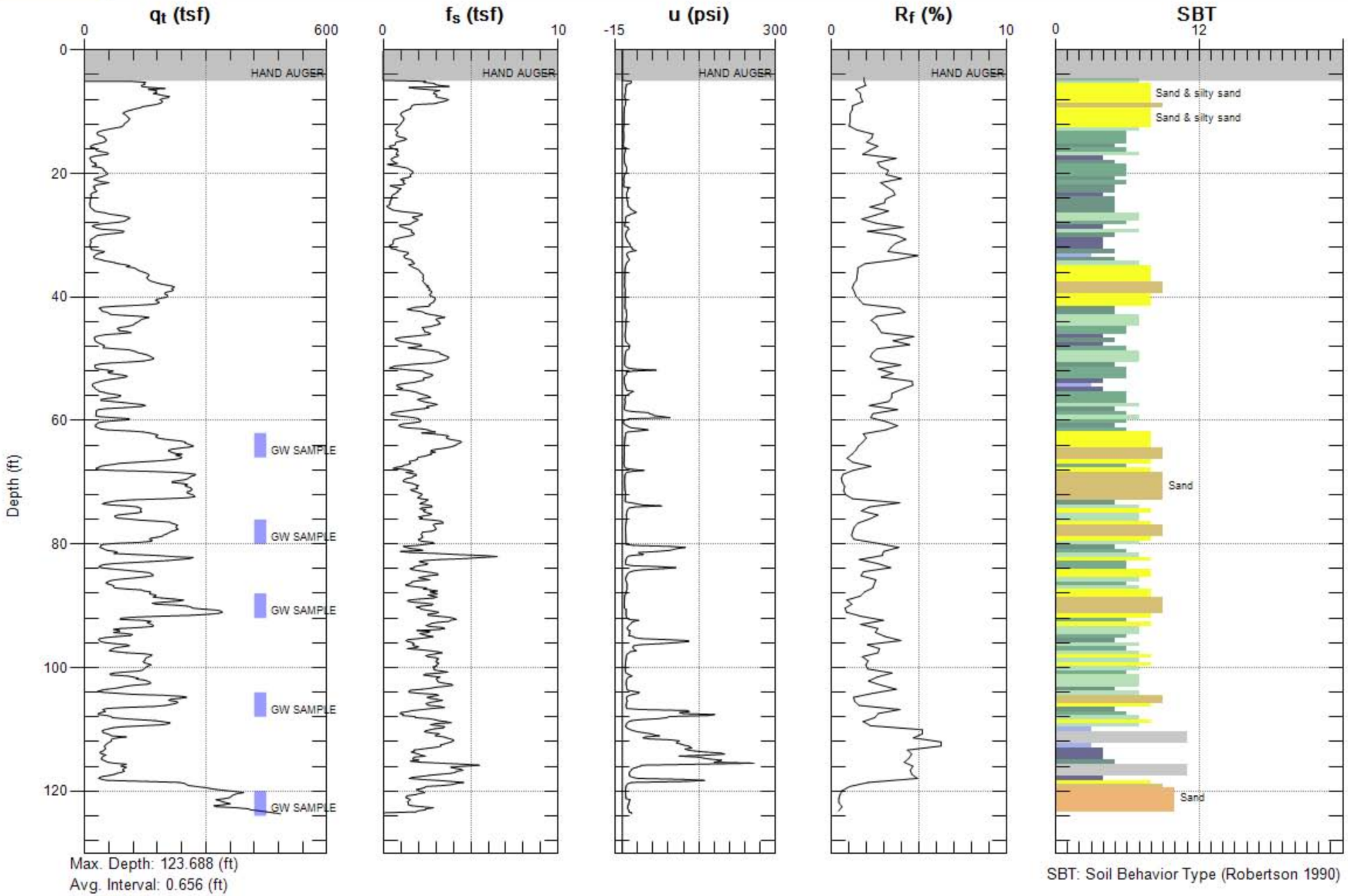


Max. Depth: 130.085 (ft)
Avg. Interval: 0.656 (ft)

SBT: Soil Behavior Type (Robertson 1990)

GILBANE FEDERAL

Site: JERVIS B. WEBB
Sounding: CPT-16
Engineer: P.PHILLIPS
Date: 10/27/2015 09:50

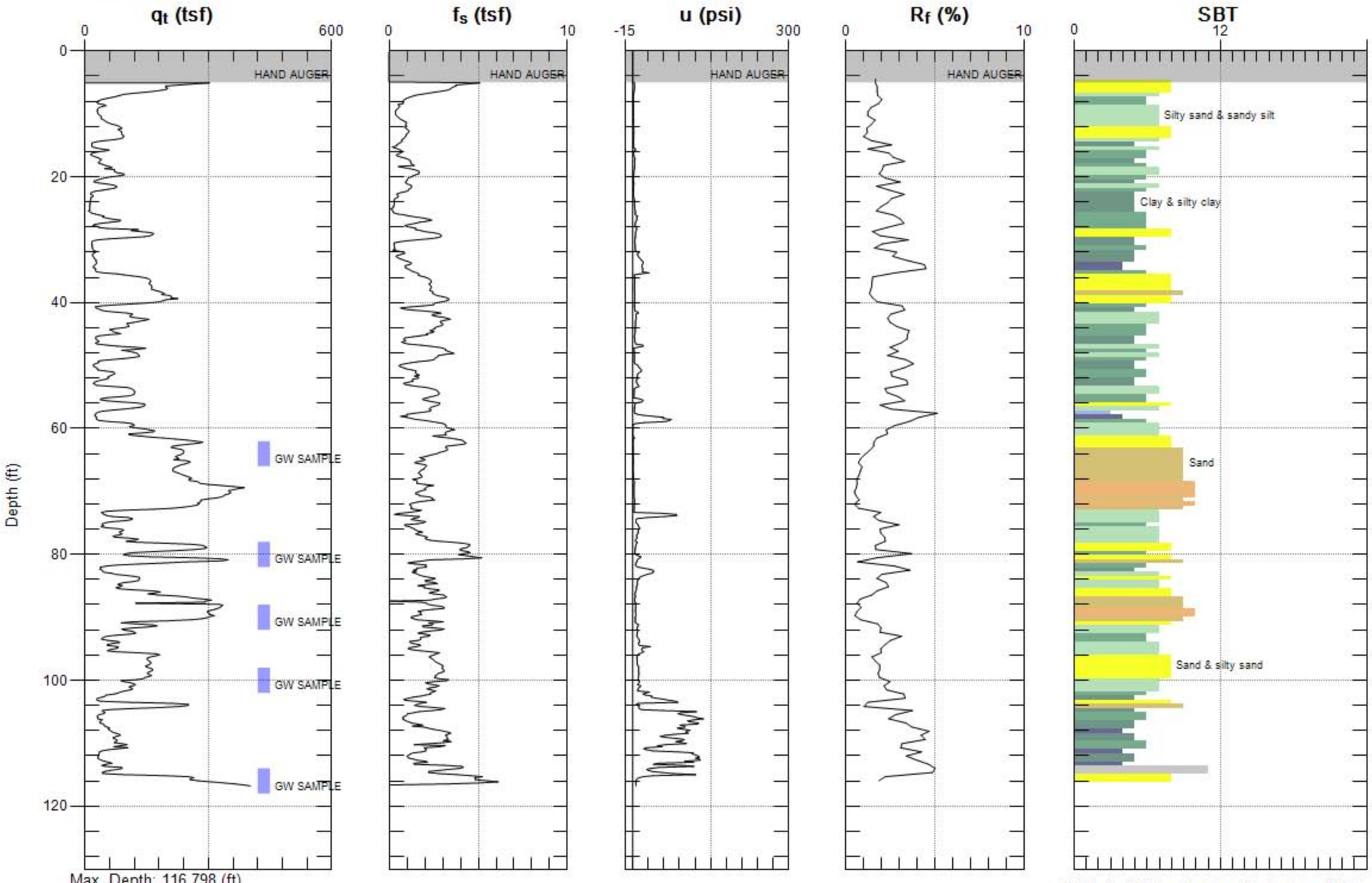


Max. Depth: 123.688 (ft)
Avg. Interval: 0.656 (ft)

SBT: Soil Behavior Type (Robertson 1990)

GILBANE FEDERAL

Site: JERVIS B. WEBB
Sounding: CPT-17
Engineer: P.PHILLIPS
Date: 10/28/2015 07:55

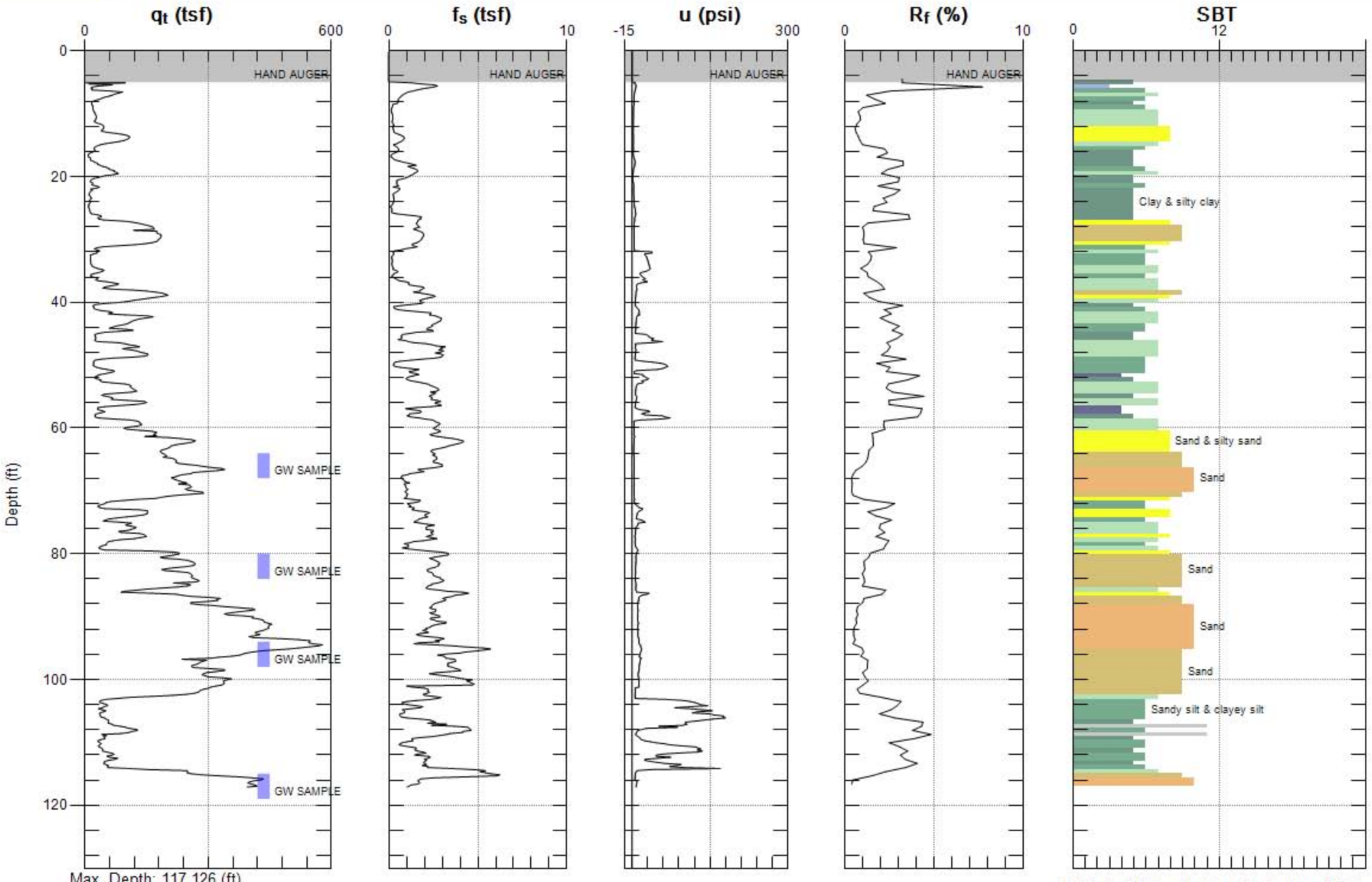


Max. Depth: 116.798 (ft)
Avg. Interval: 0.656 (ft)

SBT: Soil Behavior Type (Robertson 1990)

GILBANE FEDERAL

Site: JERVIS B. WEBB
Sounding: CPT-18
Engineer: P.PHILLIPS
Date: 10/29/2015 07:44

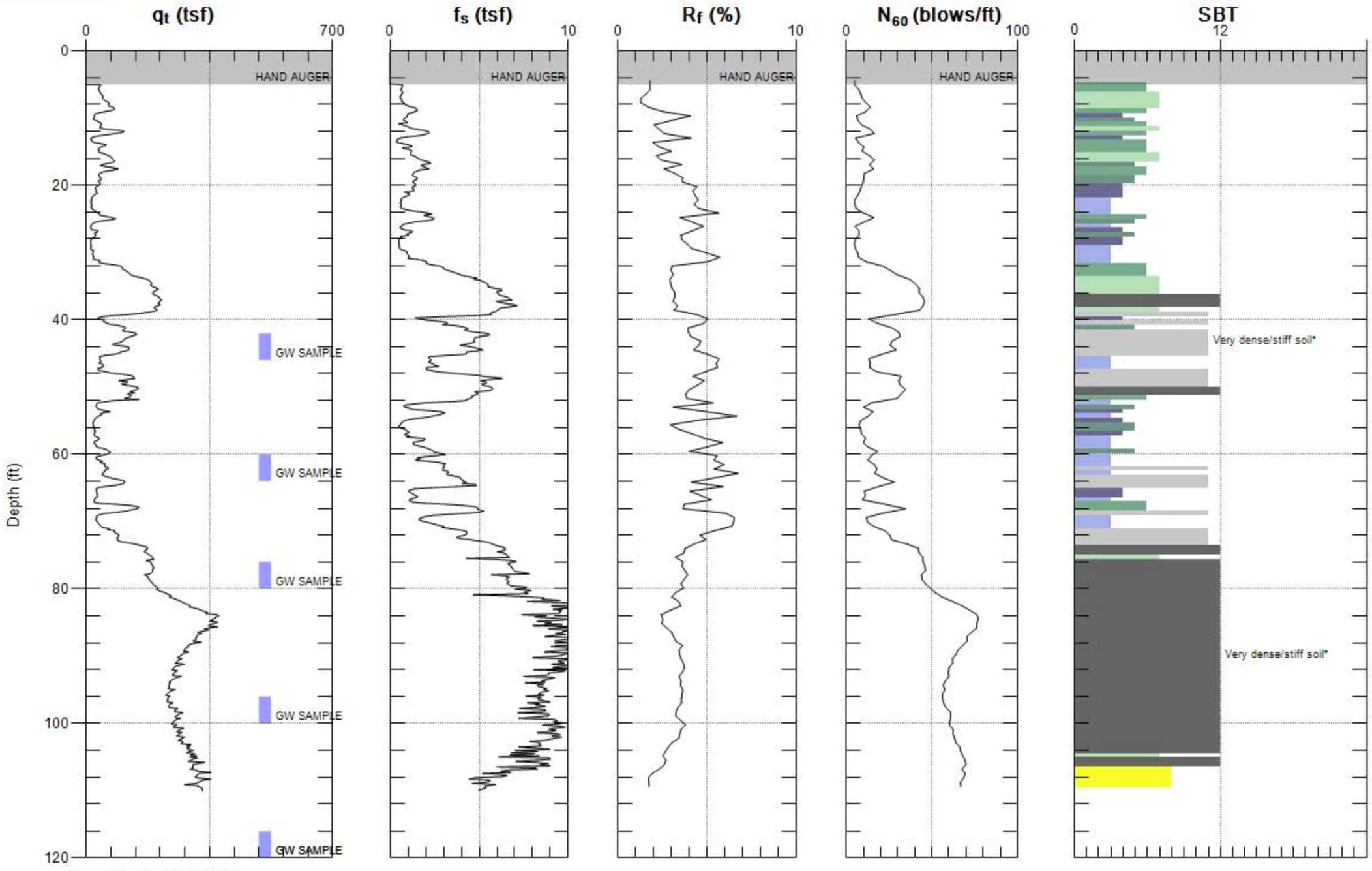


Max. Depth: 117.126 (ft)
Avg. Interval: 0.656 (ft)

SBT: Soil Behavior Type (Robertson 1990)

GILBANE FEDERAL

Site: SAIA
Sounding: Jw-CPT-20
Engineer: R.LEONG
Date: 8/16/2016 07:45

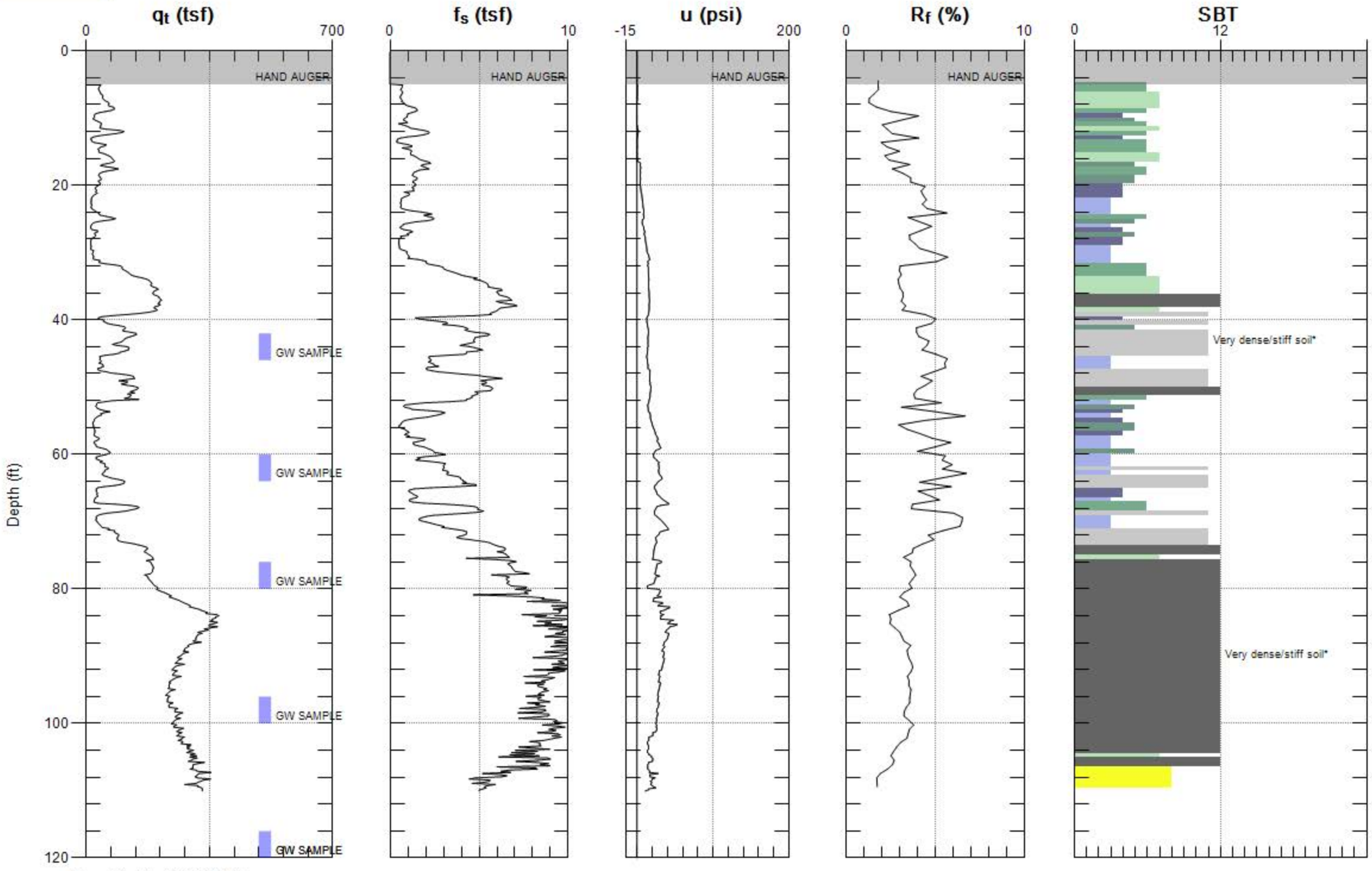


Max. Depth: 110.072 (ft)
Avg. Interval: 0.656 (ft)

SBT: Soil Behavior Type (Robertson 1990)

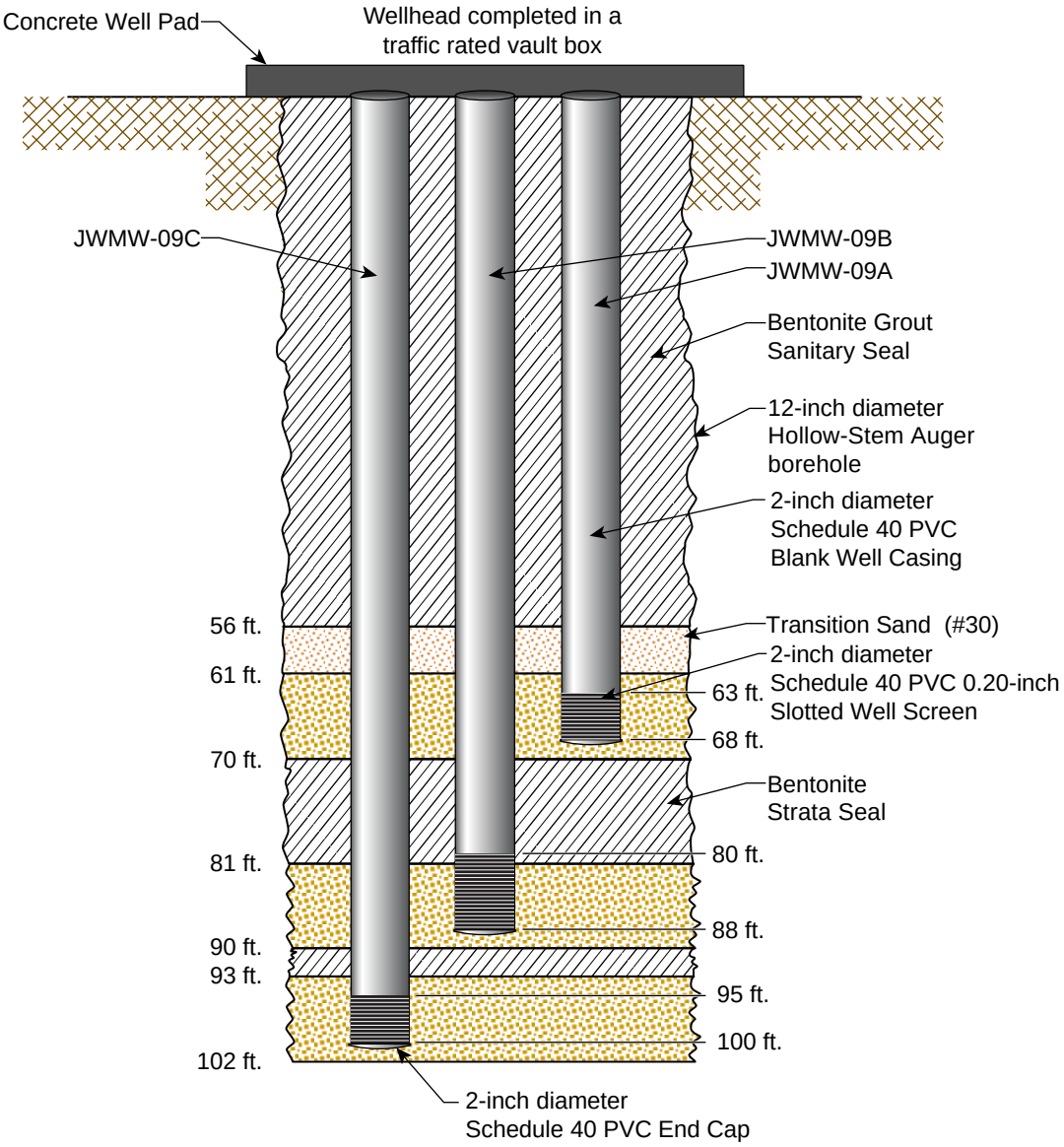
GILBANE FEDERAL

Site: SAIA
Sounding: Jw-CPT-20
Engineer: R.LEONG
Date: 8/16/2016 07:45



Max. Depth: 110.072 (ft)
Avg. Interval: 0.656 (ft)

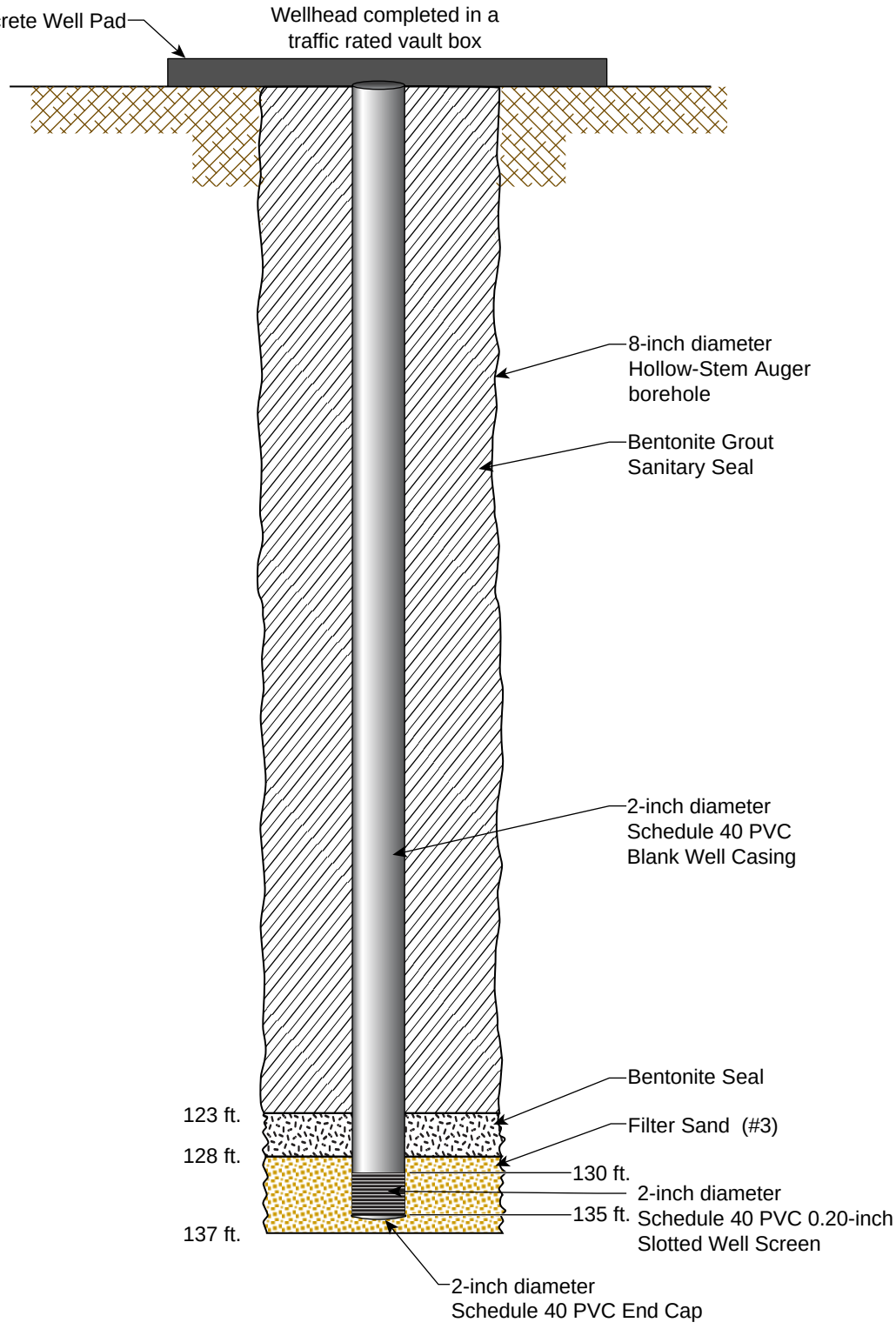
SBT: Soil Behavior Type (Robertson 1990)



Notes:
Scale is Approximate
All diameters are O.D. except the well screen, which is nominal
PVC - polyvinyl chloride

Gilbane	**Jervis Webb Company Superfund Site** Los Angeles County, California US Environmental Protection Agency	**Figure A4** JWMW-09A/B/C As Built

P:\EPAR9\0072 TO 071-RICO-09WR, Jervis B. Webb RI_FS\13.0 Graphics\JWMW_09_AsBuilt.ai 07/13/2017



Notes:

Scale is Approximate

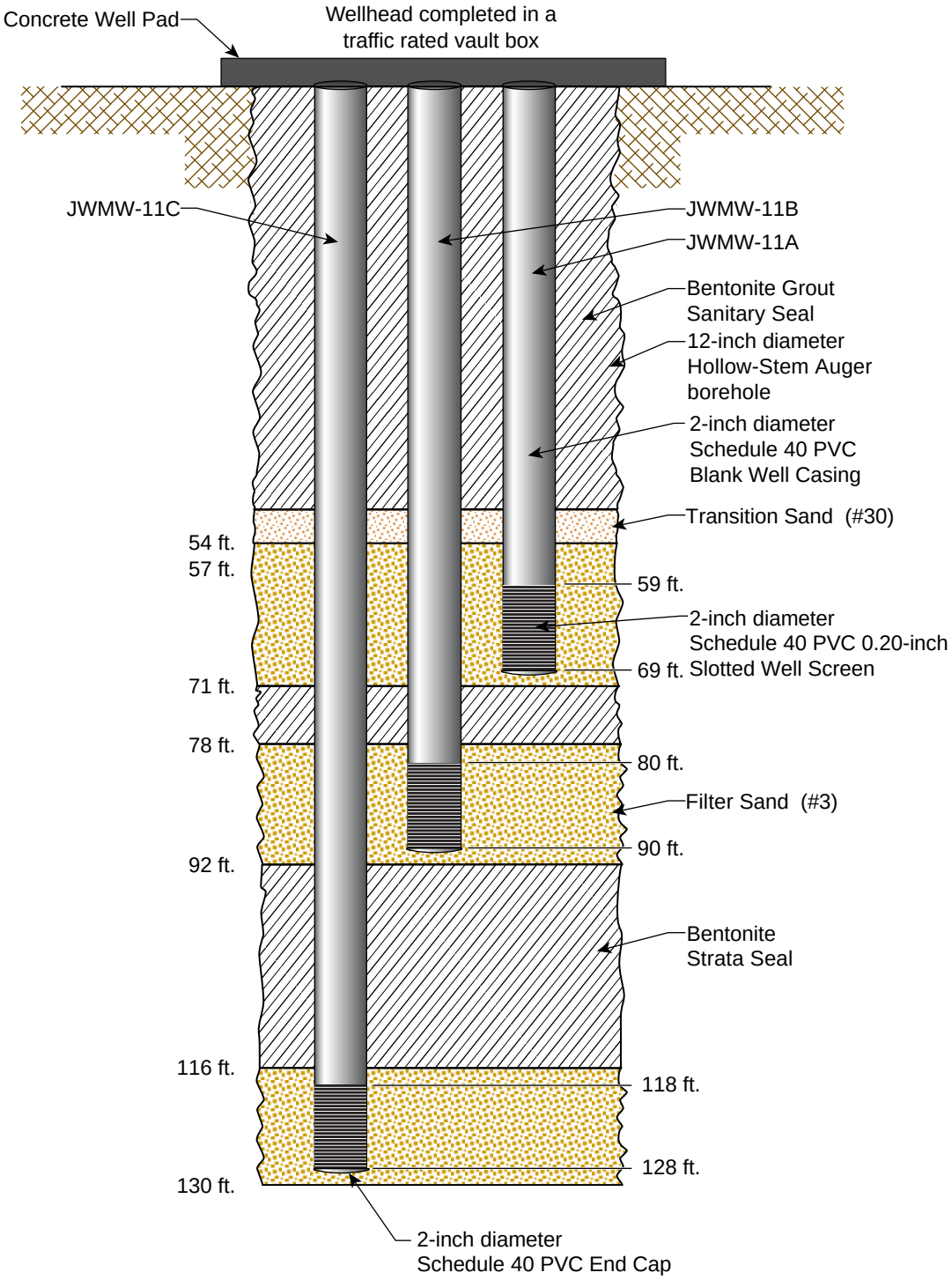
All diameters are O.D. except the well screen, which is nominal

PVC - polyvinyl chloride

Jervis Webb Company Superfund Site
Los Angeles County, California
US Environmental Protection Agency

Figure A5
JWMW-10 As Built

P:\EPAR9\0072 TO 071-RICO-09WR, Jervis B. Webb RI_FS\13.0 Graphics\JWMW_10_AsBuilt.ai 07/13/2017



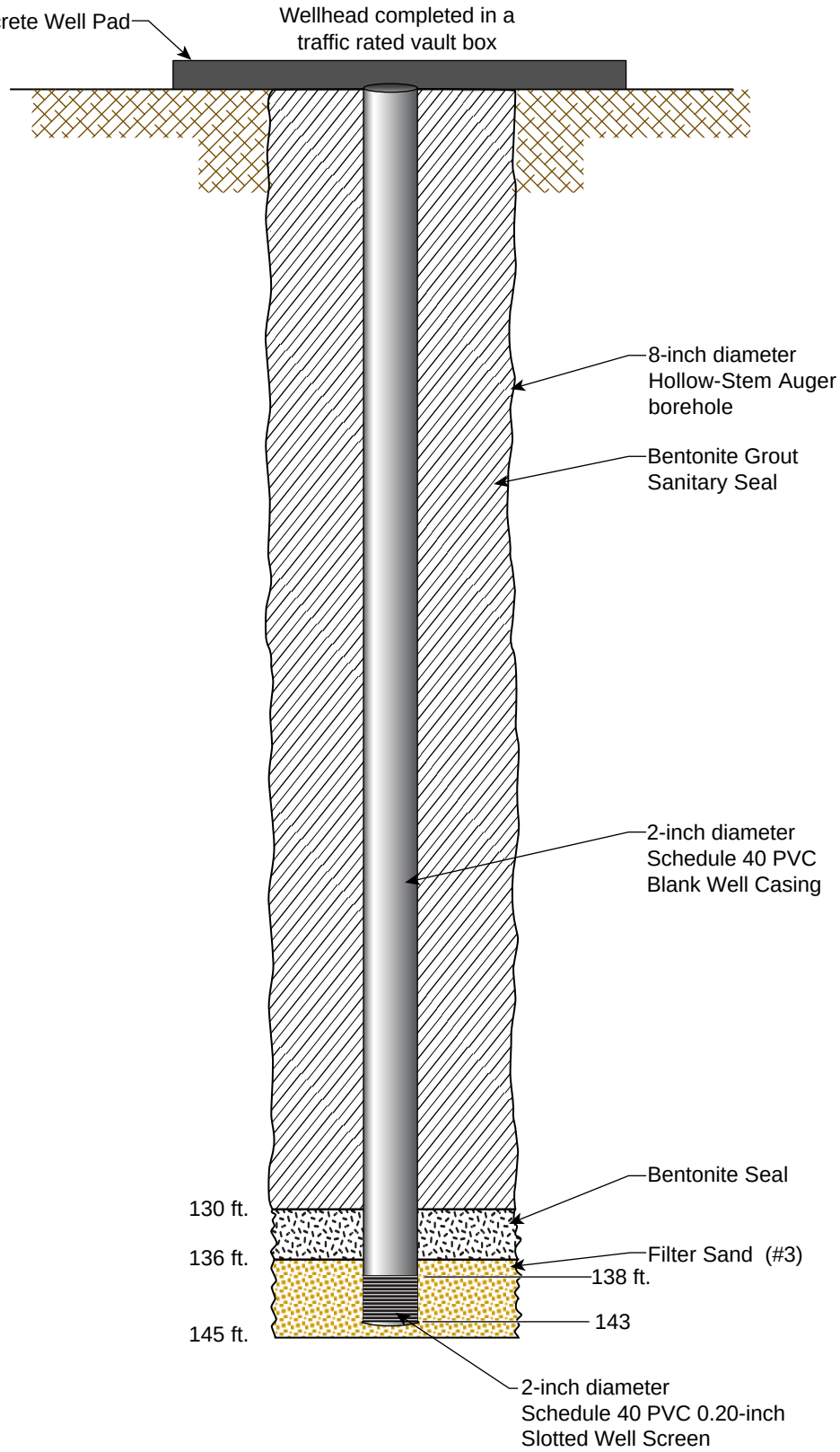
Notes:
Scale is Approximate
All diameters are O.D. except the well screen, which is nominal
PVC - polyvinyl chloride

Gilbane

Jervis Webb Company Superfund Site
Los Angeles County, California
US Environmental Protection Agency

Figure A6
JWMW-11A/B/C As Built

P:\EPAR9\0072 TO 071-RICO-09WR, Jervis B. Webb RI_FS\13.0 Graphics\JWMW_11_AsBuilt.ai 07/13/2017



Notes:

Scale is Approximate

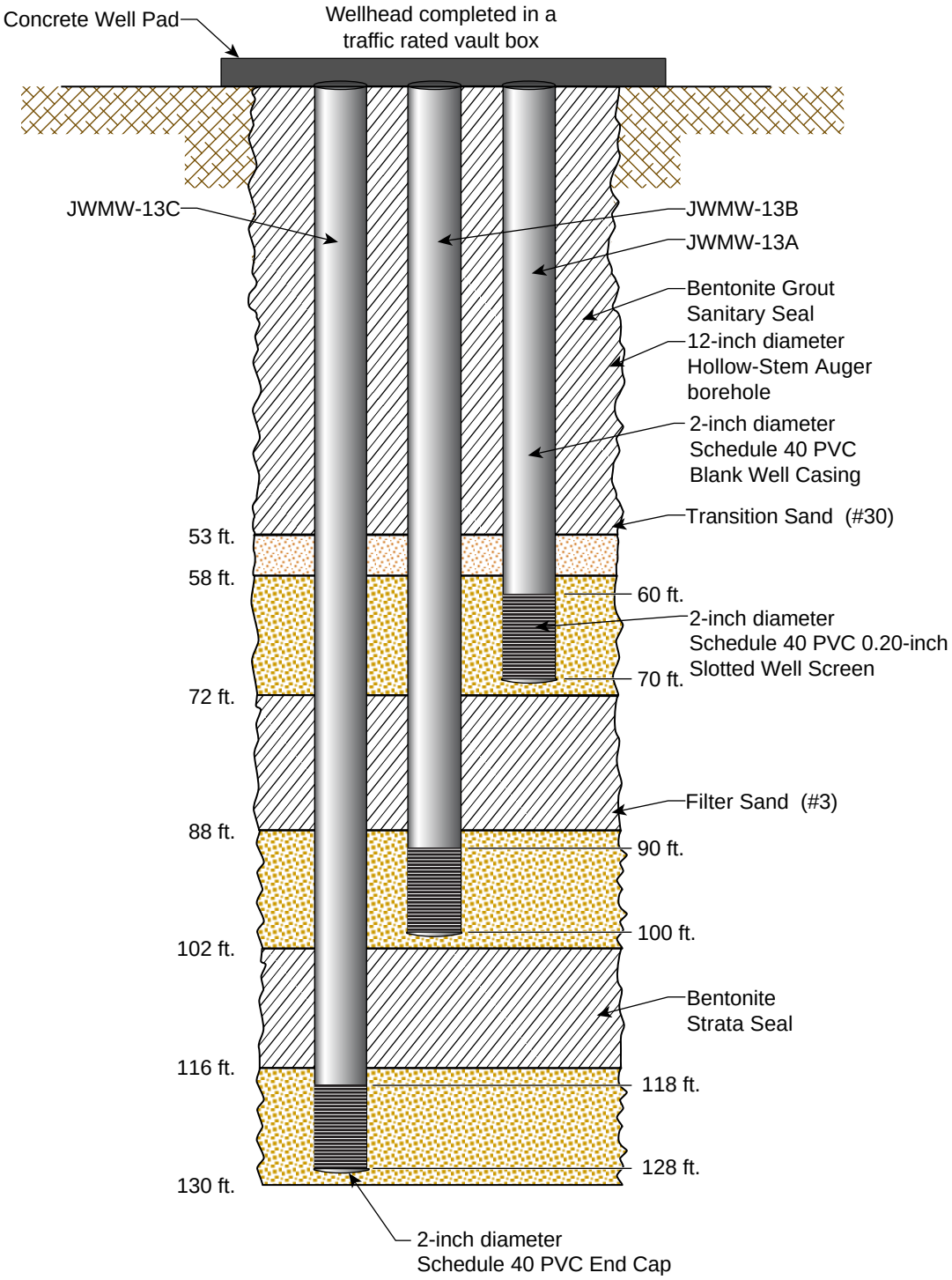
All diameters are O.D. except the well screen, which is nominal

PVC - polyvinyl chloride

Jervis Webb Company Superfund Site
Los Angeles County, California
US Environmental Protection Agency

Figure A7
JWMW-12 As Built

P:\EPAR9\0072.TO.071-RICO-09WR.Jervis B.Webb RI_FS\13.0 Graphics\JWMW_12_AsBuilt.ai 07/13/2017



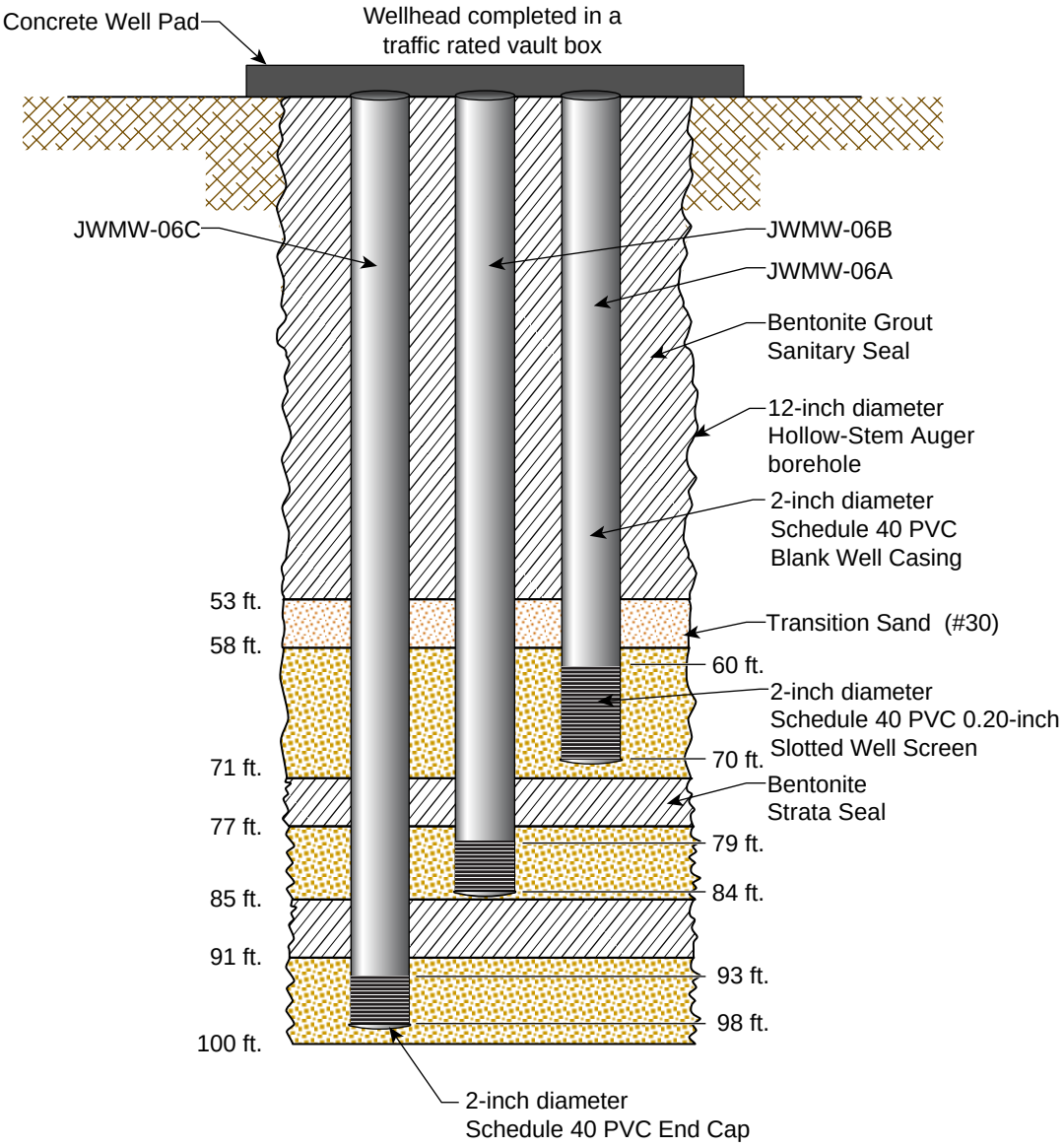
Notes:
Scale is Approximate
All diameters are O.D. except the well screen, which is nominal
PVC - polyvinyl chloride

Gilbane

Jervis Webb Company Superfund Site
Los Angeles County, California
US Environmental Protection Agency

Figure A8
JWMW-13A/B/C As Built

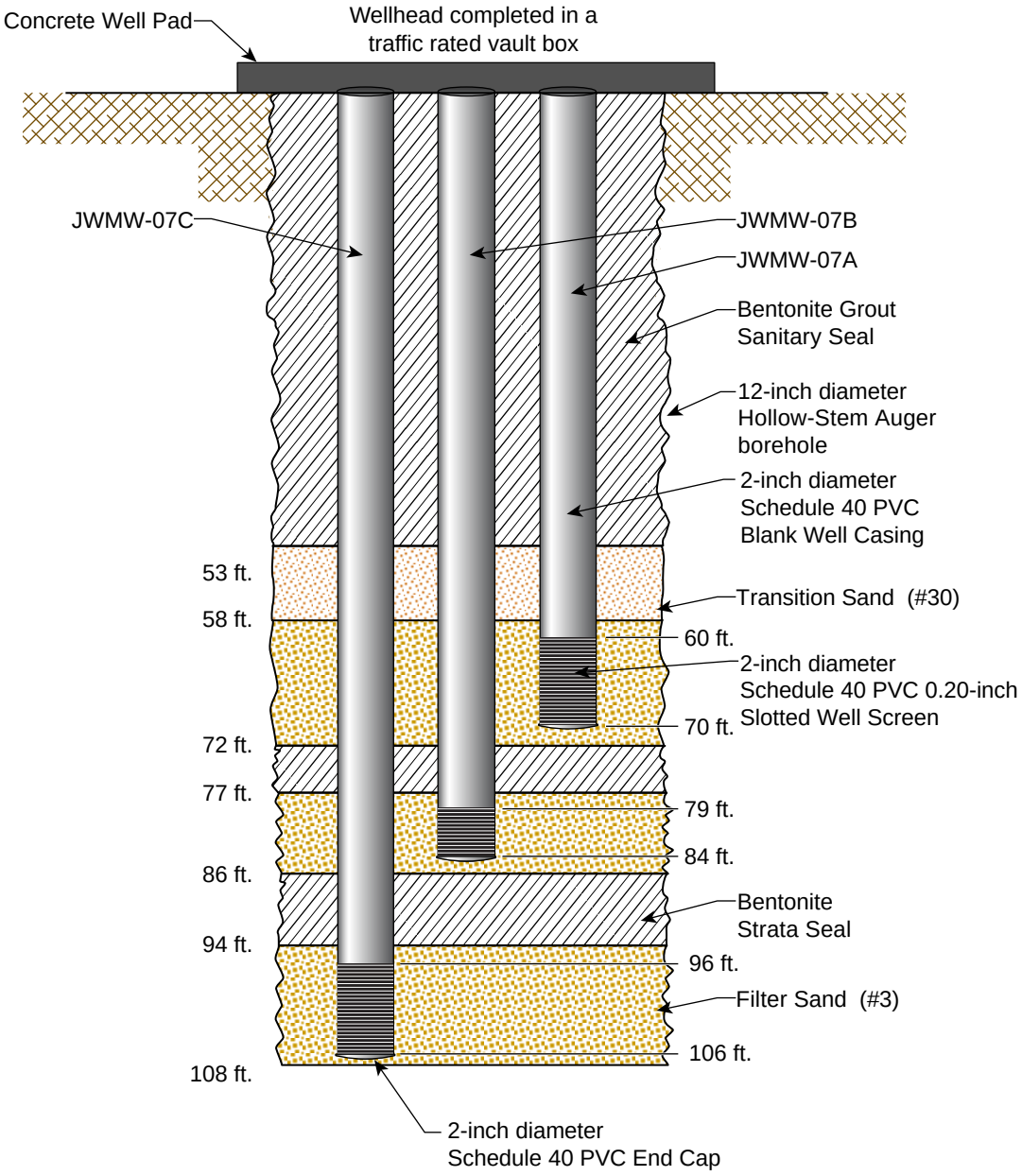
P:\EPAR9\0072 TO 071-RICO-09WR, Jervis B. Webb RI_FS\13.0 Graphics\JWMW_13_AsBuilt.ai 07/13/2017



Notes:
Scale is Approximate
All diameters are O.D. except the well screen, which is nominal
PVC - polyvinyl chloride

Gilbane	**Jervis Webb Company Superfund Site** Los Angeles County, California US Environmental Protection Agency	**Figure A1** JWMW-06A/B/C As Built

P:\EPAR9\0072 TO 071-RICO-09WR, Jervis B. Webb RI_FS\13.0 Graphics\JWMW_06_AsBuilt.ai 07/13/2017



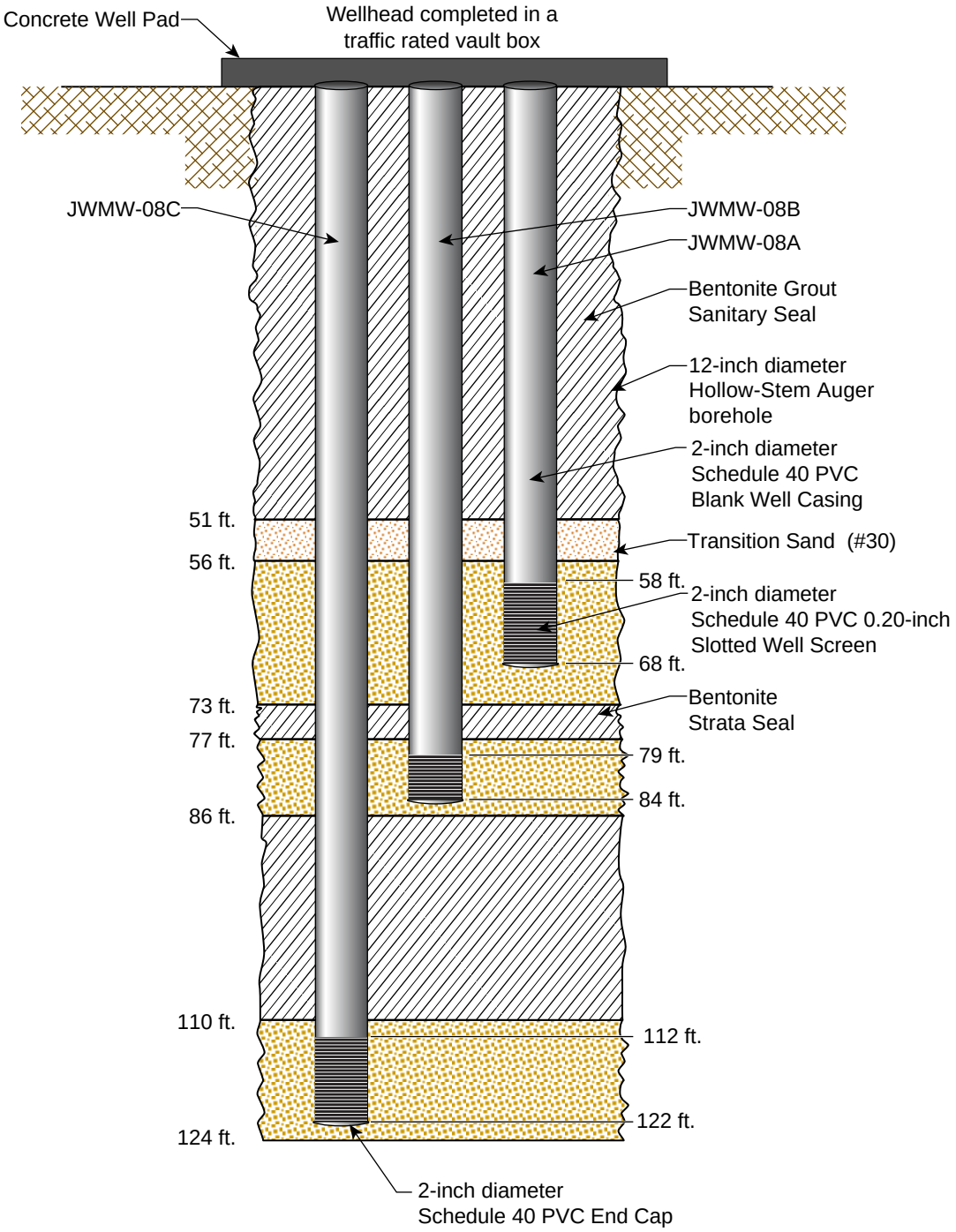
Notes:
Scale is Approximate
All diameters are O.D. except the well screen, which is nominal
PVC - polyvinyl chloride

Gilbane

Jervis Webb Company Superfund Site
Los Angeles County, California
US Environmental Protection Agency

Figure A2
JWMW-07A/B/C As Built

P:\EPAR9\0072 TO 071-RICO-09WR, Jervis B. Webb RI_FS\13.0 Graphics\JWMW_07_AsBuilt.ai 07/13/2017



Notes:
Scale is Approximate
All diameters are O.D. except the well screen, which is nominal
PVC - polyvinyl chloride

Gilbane	**Jervis Webb Company Superfund Site** Los Angeles County, California US Environmental Protection Agency	**Figure A3** JWMW-08A/B/C As Built

P:\EPAR9\0072 TO 071-RICO-09WR, Jervis B. Webb RI_FS\13.0 Graphics\JWMW_08_AsBuilt.ai 07/13/2017

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